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TELEPHONE: (408) 745-2250  
TELEX: 35-7488

# CONSUMER ENGINEERING

## FIRST ARTICLE AND SAMPLE SUBMITTANCE FORM FOR PROTOTYPE PCB'S

VENDOR \_\_\_\_\_

ATARI PART NO. CA018029 REV. NO. 3 PROJECT CK2800 (CINDY)

PART DESCRIPTION PCB

TOOLING: ☐ PROTOTYPE ☐ SOFT ☐ HARD

CAV.	DIE	SAMP.	IDENTIFICATION NOS.											

VENDOR PART NO. OR I.D. \_\_\_\_\_ QTY. RECEIVED \_\_\_\_\_

P.O. NO. \_\_\_\_\_ ITEM NO. \_\_\_\_\_ FIRST ARTICLE RECVD. DATE \_\_\_\_\_

FIRST ARTICLE APPROVED

DATE

MECH. ENG. \_\_\_\_\_

ELECT. ENG. Don Kramer

3/24/82

I.D. ENG. \_\_\_\_\_

ENG. COORD. \_\_\_\_\_

CONS. Q. ENG. \_\_\_\_\_

1st ART. COORD. \_\_\_\_\_

OTHER \_\_\_\_\_

FIRST ARTICLE REJECTED

DATE

MECH. ENG. \_\_\_\_\_

ELECT. ENG. \_\_\_\_\_

I.D. ENG. \_\_\_\_\_

ENG. COORD. \_\_\_\_\_

CONS. Q. ENG. \_\_\_\_\_

1st ART. COORD. \_\_\_\_\_

OTHER \_\_\_\_\_

COMMENTS/EVALUATION THIS PCB PERFORMS ELECTRICALLY AS REQUIRED AND

SHOWS NO IDIOSYNCRACIES WHICH WERE NOT PREVIOUSLY EVIDENT.

LOADING OF THE 9-PIN "D" CONTROLLER CONNECTORS WAS EASIER  
THAN LAST TIME. SPACING & HOLE SHAPE FOR THE RF OUTPUT JACK  
COULD BE IMPROVED IN THE FUTURE

COPIES TO:

☐ ACCOUNTS PAYABLE

☐ ENGINEERING

☐ MANUFACTURING

☐ INDUSTRIAL DESIGN

☐ PURCHASING

☐ VENDOR

☐ QUALITY ASSURANCE

FIRST ARTICLE REPORT COPIES TO: ENGINEERING; MANUFACTURING; QUALITY ASSURANCE; VENDOR



CONFIDENTIAL

ASSEMBLY TITLE / CINDY PCB SUB-ASSEMBLY P/L CAO18030

PARTS LIST SPECIFICATION

Page 1 of 3

Drawn <i>Daw Kramer</i>	
Checked <i>DK 2/16/82</i>	Mech. Eng.
Proj. Eng.	Elec. Eng.
	Mfg. Eng.
	Rev. 3

Rev.	Description	Date	Apprv.	Rev.	Description	Date	Apprv.
2 A	PROTO RELEASE						
3	PRITOT RELEASE						

PRELIMINARY  
FOR INFORMATION ONLY  
NOT A CONTROLLED DOCUMENT

Item	Part Number	Qty.	Description
1	<del>CO14180-19</del> <i>CO14181-04</i>	9	CAP, CERAMIC AXIAL: .1uf, + 20%, <del>X7R</del> <i>25V</i> C1,9,18,21,26,27,34,35,51.
2	CO14180-18	6	" " " .01uf, +20%, X7R, C5,7,13,24,49,50.
3	CO14180-17	14	" " " .001uf, +20%, X7R, C15,17,19,36 <i>37,38,39,40,41,42,43,44,45,46</i>
4	CO14180-04	1	150pf, +20%, X7R, 50V, C16
5	CO14180-07	2	470pf, +20%, X7R, 50V, C47,48
6	CO14179-01	1	22pf, +5%, NPO, 50V, C12
7	CO14179-05	1	47pf, +5%, NPO, 50V, C11
8	CO14179-19	1	100pf, +5%, NPO, 50V, C10
9	CO14179-22	1	10pf, +5%, NPO, 50V, C4
10	CO18261	2	" POLYSTYRENE AXIAL AUTO INSERTABLE: 820pf, 5%, N150, 25V, C8,52.
11	CO14353	4	" POLYESTER RADIAL: .068uf, +10%, 100V, C28- <i>39,30,31</i>
12	CO17885	1	" " " .1uf, +5%, 100V, C22
13	CO10394	1	" " " .22uf, +5%, 100V, C3
14	CO14369	2	" ELECTROLYTIC RADIAL: 4.7uf, +75-10%, 35V, C2,14
15	CO14392	1	" " " 10uf, +50-10%, 16V, C25
16	CO19040	1	" " " 3300uf, +10%, 25V, C20
17			
18			
19	14-5220	3	RESISTOR: 22Ω, 1/4W, 5%, R26,31,52
20	14-5221	7	" 220Ω, 1/4W, 5%, R27,30,34,35,51,53,5
21	14-5621	1	" 620Ω, 1/4W, 5%, R19
22	14-5102	4	" 1KΩ, 1/4W, 5%, R6,9,16,17
23	14-5182	6	" 1.8KΩ, 1/4W, 5%, R36-39,56,57
24	14-5272	1	" 2.7KΩ, 1/4W, 5%, R18
25	14-5332	2	" 3.3KΩ, 1/4W, 5%, R10,12
26	14-5472	4	" 4.7KΩ, 1/4W, 5%, R2,8,11,13
27	14-5912	1	" 9.1KΩ, 1/4W, 5%, R15
28	14-5103	15	" 10KΩ, 1/4W, 5%, R24,32,33,40-48,50,54,55
29	14-5133	2	" 13KΩ, 1/4W, 5%, R20,23
30	14-5183	1	" 18KΩ, 1/4W, 5%, R14
31	14-5243	3	" 24KΩ, 1/4W, 5%, R1,21,25
32	14-5563	1	" 56KΩ, 1/4W, 5%, R22
33	19-411504	1	POTENTIOMETER: 500KΩ, 1/4W, 5%, R7



## PARTS LIST SPECIFICATION

Page 2 of 3

Item	Part Number	Qty.	Description
34	14-5910	1	RESISTOR: 91 $\Omega$ , 1/4W, 5%, R3
35	14-5241	1	" 240 $\Omega$ , 1/4W, 5%, R4
36	14-5222	1	" 2.2K $\Omega$ , 1/4W, 5%, R58
37			
38			
39			
40	CA015796	1	CARTRIDGE SOCKET ASSEMBLY: J7
41	CO15510	1	CRYSTAL: 3.579575 MHz, $\pm$ 120HZ, HC 18, Y1
42	CO10823	3	STANDOFF: LED
43	31-1N914	4	DIODE: 1N914, CR2,3,14,15
44	31-1N4001	6	" 1N4001, CR1,4-7,16,
45	CO14776	6	" LIGHT EMITTING, DS8-13
46	CO18277	1	HEATSINK
47	CO14348	1	VOLTAGE REGULATOR, 7805, VR1
48	72-1406S	1	SCREW, #4-40x3/8 PHILLIPS PANHEAD
49	75-044	1	WASHER, #4 SPLIT
50	75-914C	1	NUT, #4 STANDARD
51	78-16001	A/R	HEATSINK COMPOUND
52	CO15752	1	INDUCTOR: 1.8uH + 5%, L3
53	CO10823	1	" 12 1/2 TURN VARIABLE .85-1.2uH, L2
54	CO14384	5	" FERRITE BEAD: L4-8
55			
56	CO17263	1	JACK, POWER: J5
57	<del>CO10448</del> -CO19062	4	" 9 PIN "D" SUB. RT. ANGLE, J1-4
58	79-5903	1	" R.F. OUTPUT, J6
59			
60	CO14386-02	3	SOCKET, I.C. 14 PIN, XU5-7
61	CO14386-03	1	" " 16 PIN, XU4
62	CO14386-08	1	" " 28 PIN, XU1
63	CO14386-09	2	" " 40 PIN, XU2,3
64			
65	CO14397-01	1	SWITCH, ROCKER S.P.D.T., S1
66	CO12241	2	" SLIDE S.P.D.T., S10,11
67	CA011620-01	8	" MOMENTARY PUSH BUTTON S.P.S.T., S2-9
68			
69	33-2N3906	2	TRANSISTOR: 2N3906, Q1,3
70	34-2N3563	1	" 2N3563, Q2
71			
72	CA011620-02	8	ALTERNATE FOR ITEM #67
73	CO10177-XX	1	ALTERNATE FOR ITEM #41

## PARTS LIST SPECIFICATION

Page 3 of 3

Item	Part Number	Qty.	Description
74	CO10727	1	ALTERNATE FOR ITEM #57
75	CO12242	2	ALTERNATE FOR ITEM #66
76	CO18028	1	P.C.B.





ASSEMBLY TITLE

CINDY PCB ASSEMBLY

P/L

CA018029

## PARTS LIST SPECIFICATION

Page 1 of 2

Drawn DAN KRAMER

Checked

Mech. Eng.

Proj. Eng.

Elec. Eng.

Rev.

3

Mfg. Eng.

Rev.	Description	Date	Apprv.	Rev.	Description	Date	Apprv.
3	PROTO RELEASE						

Item	Part Number	Qty.	Description
1	CO17235	1	7405 I.C., U6
2	CO14362	1	74 LS32 I.C., U5
3	CO17224	1	74 LS157, U4
4	CO10745	1	6507, U1
5	CO10444	1	TIA, U2
6	CO10750	1	6532 RIOT, U3
7	CO11464	1	4066 I.C., U7
8	CO18026	1	TOP SHIELD
9	CO18027	1	BOTTOM SHIELD
10			
11	CA012174	1	5 PIN R.F. MODULATOR B, A1
12	CA018030	1	P.C.B. SUB-ASSEMBLY



ASSEMBLY TITLE

CINDY PCB ASSEMBLY

P/L CAO18029

## PARTS LIST SPECIFICATION

Page 1 of 2

Drawn DAN KRAMER

Checked

Mech. Eng.

Proj. Eng.

Elec. Eng.

Rev.

3

Mfg. Eng.

Rev.	Description	Date	Apprv.	Rev.	Description	Date	Apprv.
3	PROTO RELEASE						

Item	Part Number	Qty.	Description
1	CO17235	1	7405 I.C., U6
2	CO14362	1	74 LS32 I.C., U5
3	CO17224	1	74 LS157, U4
4	CO10745	1	6507, U1
5	CO10444	1	TIA, U2
6	CO10750	1	6532 RIOT, U3
7	CO11464	1	4066 I.C., U7
8	CO18026	1	TOP SHIELD
9	CO18027	1	BOTTOM SHIELD
10			
11	CAO12174	1	5 PIN R.F. MODULATOR B, A1
12	CAO18030	1	P.C.B. SUB-ASSEMBLY



ASSEMBLY TITLE

CINDY PCB SUB-ASSEMBLY

P/L CAO18030

## PARTS LIST SPECIFICATION

Page 1 of 12

Drawn

Checked

Proj. Eng.

Mech. Eng.

Elec. Eng.

Mfg. Eng.

Rev.

2

Rev.	Description	Date	Apprv.	Rev.	Description	Date	Apprv.
2	PROTO RELEASE						

Item	Part Number	Qty.	Description
1	CO14180-19	9	CAP, CERAMIC AXIAL: .1uf, +20%, X7R, C1,9,18,21,26, 27, <del>34, 35</del> 51.
2	CO14180-18	6 <del>8</del>	" " " .01uf, +20%, X7R, C7, <del>13, 24</del> 49, 50, C5 <del>36</del>
3	CO14180-17	14 <del>16</del>	" " " .001uf, +20%, X7R, C15,17,19, <del>34</del> 46
4	CO14180-04	1	" " " 150pf, +20%, X7R, 50V, C16
5	CO14180-07	2	" " " 470pf, +20%, X7R, 50V, C47,48
6	CO14179-13	1	" " " -20pf, +5%, NPO, 50V, C4
7	CO14179-01	1	" " " 22pf, +5%, NPO, 50V, C12
8	CO14179-05	1 <del>2</del>	" " " 47pf, +5%, NPO, 50V, <del>25</del> 10,11
-9	<del>CO10821</del> CO18261	2	" POLYSTYRENE AXIAL: .820pf, 5%, 25V, C8,52
10	CO14353	4	" POLYESTER RADIAL: .068uf, +10%, 100V, C28-31
11	CO14369	2	" ELECTROLYTIC RADIAL: 4.7uf, +75-10%, 35VC2, 14
12	CO14392	1	" " " 10uf, +50-10%, 16V, C25
13	CO17517	1	" " " 3300uf, +10%, 16V, C20
14	CO17885	1 <del>2</del>	" POLYESTER RADIAL: .1uf, +5%, 100V, <del>C2</del> 22
15	CO10394	1	" " " .22uf, " " C3
16	CO14179-19	1	CAP, CERAMIC AXIAL, 100pf, ±5%, NPO, 50V, C10
17		1	" " " 10pf, ±5%, NPO, 50V, C4
18	14-5220	3	RESISTOR: 22Ω, 1/4W, 5%, R26,31,52
19	14-5560	1	" 56Ω, 1/4W, 5%, R3
20	<del>14-5521</del> 14-5221	7 <del>8</del>	" 220Ω, 1/4W, 5%, R27,30,34,35,48,51, R5,R53
21	14-5102	4	" 1KΩ, 1/4W, 5%, R6,9,16,17
22	14-5122	1	" 1.2KΩ, 1/4W, 5%, R19
23	14-5182	6	" 1.8KΩ, 1/4W, 5%, R36-39,56,57
24	14-5332	2	" 3.3KΩ, 1/4W, 5%, R10,12
25	14-5472	4 <del>5</del>	" 4.7KΩ, 1/4W, 5%, R2,8,18,11,13
26	14-5912	1 <del>2</del>	" 9.1KΩ, 1/4W, 5%, R15,24
27	14-5103	15 <del>14</del>	" 10KΩ, 1/4W, 5%, R32,33,40-48,50,54,55,24
28	14-5153	1	" 15KΩ, 1/4W, 5%, R5
29	14-5183	1 <del>2</del>	" 18KΩ, 1/4W, 5%, R14,20,23
30	14-5243	3 <del>2</del>	" 24KΩ, 1/4W, 5%, R1,25,21
31	14-5363	1	" 36KΩ, 1/4W, 5%, R21
32	14-5753	1	" 75KΩ, 1/4W, 5%, R22
33	14-5154	1	" 150KΩ, 1/4W, 5%, R4
34	19-411504	1	POTENTIOMETER: 500KΩ, 1/4W, 5%, R7
35	14-5272	1	RESISTOR 2.7kΩ, 1/4W, 5%, R18
36	14-5621	1	" 220Ω, " " R19
37	14-5133	2	" 13k, " " R20,23
	14-5562	1	" 56k, " " R22

AUTO  
INSERT

## PARTS LIST SPECIFICATION

Page 2 of 12

Item	Part Number	Qty.	Description
38	CA015796	<del>1</del>	CARTRIDGE SOCKET ASSEMBLY: J7
39	CO16010	1	CRYSTAL: 3.579545 MHz, $\pm 135$ Hz, HC 18, Y1
40			
41			
42	31-1N914	4	DIODE: 1N914, CR2,3,14,15
43	31-1N4001	<del>5</del>	" 1N4001, CR1,4-7
44	<del>CO14776</del>	<del>6</del>	" , LIGHT EMITTING, CR8-13
	<del>CO18277</del>		
45	<del>CO14799</del>	1	HEATSINK
46	CO14348	1	VOLTAGE REGULATOR, 7805, VRI
47	72-1406 <del>S</del>	1	SCREW, #4-40x3/8 PHILLIPS PANHEAD
48	75-044	1	WASHER, #4 SPLIT
49	75-914C	1	NUT, #4 STANDARD
50	78-16001	<del>A/R</del>	HEATSINK COMPOUND
51	CO15752	1	INDUCTOR: 1.8uH $\pm$ 5%, L3
52	CO10823	<del>1</del>	" 12 1/2 TURN VARIABLE .85-1.2uH, L2
53	CO14384	5	" , FERRITE BEAD: <del>14-7</del> L4-8
54			
55	<u>CO17263</u>	<del>1</del>	JACK, POWER: J5
56	<u>CO10448</u>	<del>4</del>	" 9 PIN "D" SUB. RT. ANGLE, J1-4
57	79-5903	1	" R.F. OUTPUT, J6
58			
59			
60	CO14386-02	3	<sup>E</sup> SOCKET, I.C. 14 PIN, X5-7
61	CO14386-03	1	" " 16 PIN, X4
62	CO14386-08	1	" " 28 PIN, X1
63	CO14386-09	2	" " <del>28</del> PIN, X2,3
64			
65			
66	CO14397-01	1	SWITCH, ROCKER S.P.D.T., S1
67	CO12241	2	" SLIDE S.P.D.T., S10,11
68	CA011620-01	8	" MOMENTARY PUSH BUTTON <del>X</del> S2-9
69			
70	<del>CA016075</del>	<del>1</del>	<del>SUB. ASSY. HEAT SINK AND REGULATOR TYPE: 7805</del>
71	33-2N3906	<del>2</del>	TRANSISTOR: 2N3906, Q1, Q3
72	<del>34</del> 2N3563	1	" 2N3563, Q2
73			
74	CA011620-02	8	ALTERNATE FOR ITEM #68
75	CO16805	1	ALTERNATE FOR ITEM #39
76	CO10727	1	ALTERNATE FOR ITEM #56
77	CO18028	1	P.C.B.
	14-5910	1	RESISTOR: 91 $\Omega$ , 1/4W, 5%, R3
	14-5241	1	" 240 $\Omega$ , " " R4
	14-5222	1	" 2.2k, " " R5





ASSEMBLY TITLE

CINDY PCB SUB-ASSEMBLY

P/L CA018030

PARTS LIST SPECIFICATION

Page 1 of 3

Drawn

Checked

Mech. Eng.

Proj. Eng.

Elec. Eng.

Rev.

Mfg. Eng.

3

Rev.	Description	Date	Apprv.	Rev.	Description	Date	Apprv.
2 A	PROTO RELEASE						
3	PRTOT RELEASE						

PRELIMINARY  
FOR INFORMATION ONLY  
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Item	Part Number	Qty.	Description
1	CO14180-19	9	CAP, CERAMIC AXIAL: .1uf, + 20%, X7R, C1,9,18,21,26,27,34,35,51.
2	CO14180-18	6	" " " .01uf, +20%, X7R, C5,7,13,24,49,50.
3	CO14180-17	14	" " " .001uf, +20%, X7R, C15,17,19,36-46.
4	CO14180-04	1	" " " 150pf, +20%, X7R, 50V, C16
5	CO14180-07	2	" " " 470pf, +20%, X7R, 50V, C47,48
6	CO14179-01	1	" " " 22pf, +5%, NPO, 50V, C12
7	CO14179-05	1	" " " 47pf, +5%, NPO, 50V, C11
8	CO14179-19	1	" " " 100pf, +5%, NPO, 50V, C10
9	CO14179-22	1	" " " 10pf, +5%, NPO, 50V, C4
10	CO18261	2	" POLYSTYRENE AXIAL AUTO INSERTABLE: 820pf, 5%, N150, 25V, C8,52.
11	CO14353	4	" POLYESTER RADIAL: .068uf, +10%, 100V, C28-31
12	CO17885	1	" " " .1uf, +5%, 100V, C22
13	CO10394	1	" " " .22uf, +5%, 100V, C3
14	CO14369	2	" ELECTROLYTIC RADIAL: 4.7uf, +75-10%, 35V, C2,14
15	CO14392	1	" " " 10uf, +50-10%, 16V, C25
16	<del>CO17517</del>	1	" " " 3300uf, +10%, 16V, C20
17	CO19040		
18			
19	14-5220	3	RESISTOR: 22Ω, 1/4W, 5%, R26,31,52
20	14-5221	7	" 220Ω, 1/4W, 5%, R27,30,34,35,51,53,5
21	14-5621	1	" 620Ω, 1/4W, 5%, R19
22	14-5102	4	" 1KΩ, 1/4W, 5%, R6,9,16,17
23	14-5182	6	" 1.8KΩ, 1/4W, 5%, R36-39,56,57
24	14-5272	1	" 2.7KΩ, 1/4W, 5%, R18
25	14-5332	2	" 3.3KΩ, 1/4W, 5%, R10,12
26	14-5472	4	" 4.7KΩ, 1/4W, 5%, R2,8,11,13
27	14-5912	1	" 9.1KΩ, 1/4W, 5%, R15
28	14-5103	15	" 10KΩ, 1/4W, 5%, R24,32,33,40-48,50,54,55
29	14-5133	2	" 13KΩ, 1/4W, 5%, R20,23
30	14-5183	1	" 18KΩ, 1/4W, 5%, R14
31	14-5243	3	" 24KΩ, 1/4W, 5%, R1,21,25
32	14-5563	1	" 56KΩ, 1/4W, 5%, R22
33	19-411504	1	POTENTIOMETER: 500KΩ, 1/4W, 5%, R7

## PARTS LIST SPECIFICATION

Page 2 of 3

Item	Part Number	Qty.	Description
34	14-5910	1	RESISTOR: 91Ω, 1/4W, 5%, R3
35	14-5241	1	" 240Ω, 1/4W, 5%, R4
36	14-5222	1	" 2.2KΩ, 1/4W, 5%, R58
37			
38			
39			
40	CA015796	1	CARTRIDGE SOCKET ASSEMBLY: J7
41	CO15510	1	CRYSTAL: 3.579575 MHz, +120HZ, HC 18, Y1
<del>42</del>			
42	CO18023	3	STANDOFF: L.E.D.
43	31-1N914	4	DIODE: 1N914, CR2,3,14,15
44	31-1N4001	6	" 1N4001, CR1,4-7,16,
45	CO14776	6	" LIGHT EMITTING, CR8-13
46	CO18277	1	HEATSINK
47	CO14348	1	VOLTAGE REGULATOR, 7805, VR1
48	72-1406S	1	SCREW, #4-40x3/8 PHILLIPS PANHEAD
49	75-044	1	WASHER, #4 SPLIT
50	75-914C	1	NUT, #4 STANDARD
51	78-16001	A/R	HEATSINK COMPOUND
52	CO15752	1	INDUCTOR: 1.8uH + 5%, L3
53	CO10823	1	" 12 1/2 TURN VARIABLE .85-1.2uH, L2
54	CO14384	5	" FERRITE BEAD: L4-8
55			
56	CO17263	1	JACK, POWER: J5
57	CO10448	4	" 9 PIN "D" SUB. RT. ANGLE, J1-4
58	79-5903	1	" R.F. OUTPUT, J6
59			
60	CO14386-02	3	SOCKET, I.C. 14 PIN, X5-7
61	CO14386-03	1	" " 16 PIN, X4
62	CO14386-08	1	" " 28 PIN, X1
63	CO14386-09	2	" " 40 PIN, X2,3
64			
65	CO14397-02	1	SWITCH, ROCKER S.P.D.T., S1
66	CO12241	2	" SLIDE S.P.D.T., S10,11
67	CA011620-01	8	" MOMENTARY PUSH BUTTON S.P.S.T., S2-9
68			
69	33-2N3906	2	TRANSISTOR: 2N3906, Q1,3
70	34-2N3563	1	" 2N2563, Q2
71			
72	CA011620-02	8	ALTERNATE FOR ITEM #67
73	CO10177-XX	1	ALTERNATE FOR ITEM #41



## PARTS LIST SPECIFICATION

Page 3 of 3

Item	Part Number	Qty.	Description
74	CO10727	1	ALTERNATE FOR ITEM #57
75	CO12242	2	ALTERNATE FOR ITEM #66
<del>76</del> 76	<del>CO14392-02</del> CO18028	<del>1</del> 1	<del>ALTERNATE FOR ITEM #65</del> P.C.B.



ASSEMBLY TITLE

CINDY PCB ASSEMBLY

P/L CAO18029

## PARTS LIST SPECIFICATION

Page 1 of 2

Drawn DAN KRAMER

Checked

Mech. Eng.

Proj. Eng.

Elec. Eng.

Mfg. Eng.

Rev.

3


Rev.	Description	Date	Apprv.	Rev.	Description	Date	Apprv.
3	PROTO RELEASE						

Item	Part Number	Qty.	Description
1	CO17235	1	7405 I.C., U6
2	CO14362	1	74 LS32 I.C., U5
3	CO17224	1	74 LS157, U4
4	CO10745	1	6507, U1
5	CO10444	1	TIA, U2
6	CO10750	1	6532 RIOT, U3
7	CO11464	1	4066 I.C., U7
8	CO18026	1	TOP SHIELD
9	CO18027	1	BOTTOM SHIELD
10			
11	CAO12174	1	5 PIN R.F. MODULATOR B, A1
12	CAO18030	1	P.C.B. SUB-ASSEMBLY





INTER-OFFICE MEMO

TO: AL BECK  
FROM: ERIC BREEZE   
SUBJECT: CINDY HEAT SINK PCB MOUNTING HOLES

---

DATE: 2/9/82

Attached is the Mechanical Drawing for Heat Sink #C018277 along with a copy of Rich Papp's Memo stating reasons for the latest configuration.

The holes should be changed from rectangular to round to accomodate this new sink design.

EB/mam

Attachments: (2)

cc: L. BANKS  
R. YAPO  
D. KRAMER  
J. LOZANO



INTER-OFFICE MEMO

TO: ERIC BREEZE  
FROM: RICH PAPP *[Signature]*  
SUBJECT: CINDY HEAT SINK

---

DATE: 2/8/82

Preliminary indications show that are best choice for the heat sink will be a modified Thermalloy.

Thermalloy will make the heat sink per our drawing and we will use their clip on solder tabs.

The reason being for the use of other solder tabs instead of the stamped tab is a 20¢ differential.

Please advise P.C. Department of larger holes required.

Attached is a copy of the latest drawing.

RP/mw  
Attachment

cc: Todd Weber  
Dave Remson



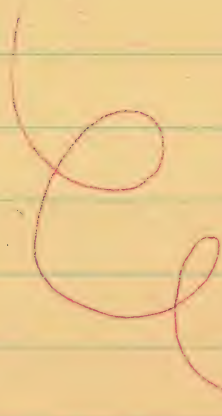
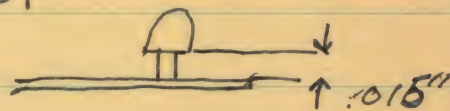


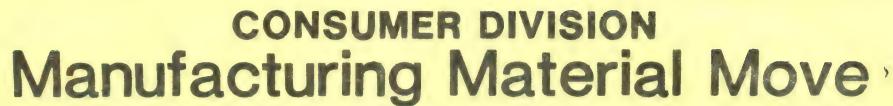
CINDY

- ① INCREASE VOLTAGE RATING FOR C20 FROM 16V TO 25V
- ② HOW TO KEEP LED'S UP OFF OF BOARD (HOW FAR?) <sup>PUT ON SUB-ASSY?</sup>
- ③ SHOW VOLTAGE RATING FOR C20 ON SUB-ASSY DWG. (25V)
- ④ CORRECT C75 VALUE, IS 4.7, 5/10 10  $\mu$ f
- ⑤ CHECK ON DWG # C017517 FOR C20 RATING

DETAIL ON SUB-ASSY  
TO SHOW SIDE VIEW & C

C018023 LED STANDOFF  
ADD TO PART LIST







37604

3M132 (4/81)



# FIRST ARTICLE AND SAMPLE SUBMITTANCE FORM FOR PROTOTYPE PCB'S

COMMENTS/EVALUATION ONLY ONE OBVIOUS PROBLEM: CONTROLLER JACKS WILL NOT INSERT EASILY. THE CENTER LOCATING <sup>SLOT</sup> FOR THE LOCKING TAB IS NOT CLOSE ENOUGH TO THE CENTER LINE FOR THE 2 OUTER PIN HOLES

--○----○-- ← IS --○-----○-- ← SHOULD BE

1E011 R1 (10-80)



1/26/82

# CINDY REV 3 PARTS LIST DISTRIBUTION

DAN KRAMER

JOHN LOZANO

JOE TILLEY

ERIC BREEZE

DAVE REMSON

ADOLFO GOMEZ

HUGH LEE

JIM HOOPER (DRAFTING)

AL BECK (PCB LAYOUT)

BOB BOUSMAHA

TODD WEBER

HANS KRAMER - 3099 ORCHARD 946-4174

DENNIS DE GHEBBER - 1171

JACKIE SOMMERS - 1171

JOHN DI FALCO - 1171

GEE MUNOZ - BERNARDO (SEND TO 1171 % PAUL DI LEO)

JIM FERRY (PURCHASING)

JOE JACOBY }  
JIM SCHNEIDER } BERNARDO (PROTO RUN)



CONFIDENTIAL

ASSEMBLY TITLE / CINDY PCB SUB-ASSEMBLY

P/L CA018030

PARTS LIST SPECIFICATION

Page 1 of 3

Drawn *DAWKRAMER 1/20/82*

Checked

Mech. Eng.

Proj. Eng.

Elec. Eng.

Mfg. Eng.

Rev.

3

Rev.	Description	Date	Apprv.	Rev.	Description	Date	Apprv.
<del>2A</del>	PROTO RELEASE						
3							

PRELIMINARY

FOR INFORMATION ONLY

NOT A CONTROLLED DOCUMENT

Item	Part Number	Qty.	Description
1	CO14180-19	9	CAP, CERAMIC AXIAL: .1uf, $\pm 20\%$ , X7R, C1,9,18,21,26,27,34,35,51.
2	CO14180-18	6	" " " .01uf, $\pm 20\%$ , X7R, C5,7,13,24,49,50.
3	CO14180-17	14	" " " .001uf, $\pm 20\%$ , X7R, C15,17,19,36-46.
4	CO14180-04	1	" " " 150pf, $\pm 20\%$ , X7R, 50V, C16
5	CO14180-07	2	" " " 470pf, $\pm 20\%$ , X7R, 50V, C47,48
6	CO14179-01	1	" " " 22pf, $\pm 5\%$ , NPO, 50V, C12
7	CO14179-05	1	" " " 47pf, $\pm 5\%$ , NPO, 50V, C11
8	CO14179-19	1	" " " 100pf, $\pm 5\%$ , NPO, 50V, C10
9	CO14179-22	1	" " " 10pf, $\pm 5\%$ , NPO, 50V, C4
10	CO18261	2	" POLYSTYRENE AXIAL AUTO INSERTABLE: 820pf, 5%, N150, 25V, C8,52.
11	CO14353	4	" POLYESTER RADIAL: .068uf, $\pm 10\%$ , 100V, C28-31
12	CO17885	1	" " " .1uf, $\pm 5\%$ , 100V, C22
13	CO10394	1	" " " .22uf, $\pm 5\%$ , 100V, C3
14	CO14369	2	" ELECTROLYTIC RADIAL: 4.7uf, $\pm 75-10\%$ , 35V, C2,14
15	CO14392	1	" " " 10uf, $\pm 50-10\%$ , 16V, C25
16	CO17517	1	" " " 3300uf, $\pm 10\%$ , 16V, C20
17			
18			
19	14-5220	3	RESISTOR: 22 $\Omega$ , 1/4W, 5%, R26,31,52
20	14-5221	7	" 220 $\Omega$ , 1/4W, 5%, R27,30,34,35,51,53,5
21	14-5621	1	" 620 $\Omega$ , 1/4W, 5%, R19
22	14-5102	4	" 1K $\Omega$ , 1/4W, 5%, R6,9,16,17
23	14-5182	6	" 1.8K $\Omega$ , 1/4W, 5%, R36-39,56,57
24	14-5272	1	" 2.7K $\Omega$ , 1/4W, 5%, R18
25	14-5332	2	" 3.3K $\Omega$ , 1/4W, 5%, R10,12
26	14-5472	4	" 4.7K $\Omega$ , 1/4W, 5%, R2,8,11,13
27	14-5912	1	" 9.1K $\Omega$ , 1/4W, 5%, R15
28	14-5103	15	" 10K $\Omega$ , 1/4W, 5%, R24,32,33,40-48,50,54,55
29	14-5133	2	" 13K $\Omega$ , 1/4W, 5%, R20,23
30	14-5183	1	" 18K $\Omega$ , 1/4W, 5%, R14
31	14-5243	3	" 24K $\Omega$ , 1/4W, 5%, R1,21,25
32	14-5563	1	" 56K $\Omega$ , 1/4W, 5%, R22
33	19-411504	1	POTENTIOMETER: 500K $\Omega$ , 1/4W, 5%, R7



## PARTS LIST SPECIFICATION

Page 2 of 3

Item	Part Number	Qty.	Description
34	14-5910	1	RESISTOR: 91Ω, 1/4W, 5%, R3
35	14-5241	1	" 240Ω, 1/4W, 5%, R4
36	14-5222	1	" 2.2KΩ, 1/4W, 5%, R58
37			
38			
39			
40	CAO15796	1	CARTRIDGE SOCKET ASSEMBLY: J7
41	CO15510	1	CRYSTAL: 3.579575 MHz, +120HZ, HC 18, Y1
42			
43	31-1N914	4	DIODE: 1N914, CR2, 3, 14, 15
44	31-1N4001	6	" 1N4001, CR1, 4-7, 16, 17
45	CO14776	6	" LIGHT EMITTING, CR8-13 DS
46	CO18277	1	HEATSINK
47	CO14348	1	VOLTAGE REGULATOR, 7805, VR1
48	72-1406S	1	SCREW, #4-40x3/8 PHILLIPS PANHEAD
49	75-044	1	WASHER, #4 SPLIT
50	75-914C	1	NUT, #4 STANDARD
51	78-16001	A/R	HEATSINK COMPOUND
52	CO15752	1	INDUCTOR: 1.8uH + 5%, L3
53	CO10823	1	" 12 1/2 TURN VARIABLE .85-1.2uH, L2
54	CO14384	5	" FERRITE BEAD: L4-8
55			
56	CO17263	1	JACK, POWER: J5
57	CO10448	4	" 9 PIN "D" SUB. RT. ANGLE, J1-4
58	79-5903	1	" R.F. OUTPUT, J6
59			
60	CO14386-02	3	SOCKET, I.C. 14 PIN, X5-7
61	CO14386-03	1	" " 16 PIN, X4
62	CO14386-08	1	" " 28 PIN, X1
63	CO14386-09	2	" " 40 PIN, X2, 3
64			
65	CO14397-02	1	SWITCH, ROCKER S.P.D.T., S1
66	CO12241	2	" SLIDE S.P.D.T., S10, 11
67	CAO11620-01	8	" MOMENTARY PUSH BUTTON S.P.S.T., S2-9
68			
69	33-2N3906	2	TRANSISTOR: 2N3906, Q1, 3
70	34-2N3563	1	" 2N2563, Q2
71			
72	CAO11620-02	8	ALTERNATE FOR ITEM #67
73	CO10177-XX	1	ALTERNATE FOR ITEM #41

XU5-7  
XU4  
XU1  
XU2,3

32

## PARTS LIST SPECIFICATION

Page 3 of 3

Item	Part Number	Qty.	Description
74	CO10727	1	ALTERNATE FOR ITEM #57
76	CO12242	2	ALTERNATE FOR ITEM #66
75	CO18028	1	P.C.B.



PARTS LIST SPECIFICATION				Page 1 of 22
Drawn				
Checked		Mech. Eng.		
Proj. Eng.		Elec. Eng.		Rev.
		Mfg. Eng.		2

Rev.	Description	Date	Apprv.	Rev.	Description	Date	Apprv.
2	PROTO RELEASE						

Item	Part Number	Qty.	Description
1	CO14180-19	9	CAP, CERAMIC AXIAL: .1uf, +20%, X7R, C1,9,18,21,26,27,32,33,51.
2	CO14180-18	65	" " " .01uf, +20%, X7R, C7,13,24,49,50,C5
3	CO14180-17	1416	" " " .001uf, +20%, X7R, C15,17,19,34-46
4	CO14180-04	1	" " " 150pf, +20%, X7R, 50V, C16
5	CO14180-07	2	" " " 470pf, +20%, X7R, 50V, C47,48
6	CO14179-13	1	" " " 20pf, +5%, NPO, 50V, C4
7	CO14179-01	1	" " " 22pf, +5%, NPO, 50V, C12
8	CO14179-05	1	" " " 47pf, +5%, NPO, 50V, C5,10,11
-9	CO10821 CO18261	2	" POLYSTYRENE AXIAL: 820pf, 5%, 25V, C8,52
10	CO14353	4	" POLYESTER RADIAL: .068uf, +10%, 100V, C28-31
11	CO14369	2	" ELECTROLYTIC RADIAL: 4.7uf, +75-10%, 35VC2, 14
12	CO14392	1	" " " 10uf, +50-10%, 16V, C25
13	CO17517	1	" " " 3300uf, +-10%, 16V, C20
14	CO17885	2	" POLYESTER RADIAL: .1uf, +5%, 100V, C3,22
15	CO10394	1	" " " .22uf, " " C3
16	CO14179-19	1	CAP, CERAMIC AXIAL 100pf, 55% NPO, 50V, C10
17		1	" " " 10pf, 55% NPO, 50V, C4
18	14-5220	3	RESISTOR: 22Ω, 1/4W, 5%, R26,31,52
19	14-5560	1	" 56Ω, 1/4W, 5%, R3
20	14-5521 14-5221	78	" 220Ω, 1/4W, 5%, R27,30,34,35,49,51,R5,R53
21	14-5102	4	" 1KΩ, 1/4W, 5%, R6,9,16,17
22	14-5122	1	" 1.2KΩ, 1/4W, 5%, R19
23	14-5182	6	" 1.8KΩ, 1/4W, 5%, R36-39,56,57
24	14-5332	2	" 3.3KΩ, 1/4W, 5%, R10,12
25	14-5472	45	" 4.7KΩ, 1/4W, 5%, R2,8,18,11,13
26	14-5912	12	" 9.1KΩ, 1/4W, 5%, R15,24
27	14-5103	1514	" 10KΩ, 1/4W, 5%, R32,33,40-48,50,54,55,24
28	14-5153	1	" 15KΩ, 1/4W, 5%, R5
29	14-5183	13	" 18KΩ, 1/4W, 5%, R14,20,23
30	14-5243	32	" 24KΩ, 1/4W, 5%, R1,25,21
31	14-5363	1	" 36KΩ, 1/4W, 5%, R21
32	14-5753	1	" 75KΩ, 1/4W, 5%, R22
33	14-5154	1	" 150KΩ, 1/4W, 5%, R4
34	19-411504	1	POTENTIOMETER: 500KΩ, 1/4W, 5%, R7
35	14-5272	1	RESISTOR 2.7kΩ, 1/4W, 5% R18
36	14-5621	1	" 620Ω, " " R19
37	14-5133	2	" 13K, " " R20,23
	14-5562	1	" 56k, " " R22

## PARTS LIST SPECIFICATION

Page 2 of 82

Item	Part Number	Qty.	Description
38	CA015796	1	1-10 WIDE SOCKET ASSEMBLY: J7
39	CO16010	1	1-10 WIDE SOCKET ASSEMBLY: J7
40			
41			
42	31-1N914	4	DIODE: 1N914, CR2,3,14,15
43	31-1N4001	4	" 1N4001, CR1,4-7,16,17
44	CO14776	6	" LIGHT EMITTING, CRB-13
45	CO14799	1	HEATSINK
46	CO14348	1	VOLTAGE REGULATOR, 7805, VRI
47	72-1406S	1	SCREW, #4-40x3/8 PHILLIPS PANHEAD
48	75-044	1	WASHER, #4 SPLIT
49	75-914C	1	NUT, #4 STANDARD
50	78-16001	A/R	HEATSINK COMPOUND
51	CO15752	1	INDUCTOR: 1.8uH $\pm$ 5%, L3
52	CO10823	1	" 12 1/2 TURN VARIABLE .85-1.2uH, L2
53	CO14384	5	" , FERRITE BEAD: L1,4-7 L4-8
54			
55	CO17263	1	JACK, POWER: J5
56	CO10448	4	" 9 PIN "D" SUB. RT. ANGLE, J1-4
57	79-5903	1	" R.F. OUTPUT, J6
58			
59			
60	CO14386-02	3	SOCKET, I.C. 14 PIN, X5-7
61	CO14386-03	1	" " 16 PIN, X4
62	CO14386-08	1	" " 28 PIN, X1
63	CO14386-09	2	" " 20 PIN, X2,3
64			
65			
66	CO14397-01	1	SWITCH, ROCKER S.P.D.T., S1
67	CO12241	2	" SLIDE S.P.D.T., S10,11
68	CA011620-01	8	" MOMENTARY PUSH BUTTON S2-9
69			
70	CA016075	1	SUB. ASSY. HEAT SINK AND REGULATOR TYPE: 7805
71	33-2N3906	2	TRANSISTOR: 2N3906, Q1, Q3
72	34-2N3563	1	" 2N3563, Q2
73			
74	CA011620-02	8	ALTERNATE FOR ITEM #68
75	CO16805	1	ALTERNATE FOR ITEM #39
76	CO10727	1	ALTERNATE FOR ITEM #56
77	CO18028	1	P.C.B.
	14-5910	1	RESISTOR: 91 $\Omega$ , 1/4W, 5%, R3
	14-5241	1	" 240 $\Omega$ , " " " R4
	14-5222	1	" 2.2k, " " " R5





INTER-OFFICE MEMO

TO: RAY QUIBELAN

FROM: ERIC BREEZE 

DATE: 01/05/82

SUBJECT: CINDY REV 2

---

REV 2 P.C. Boards were received on 12/28/81 and were assembled and tested. Electrically they performed as expected except for one missing P.C. Board trace in the oscillator circuit. It is understood that another revision is anticipated due to a number of minor mechanical points. If this is the case, a number of minor layouts could be improved.

1. Eliminate R28 pads and silkscreen lift in by P.C.B. Layout from Rev. 1.
2. Eliminate C32 and C33 as they are unnecessary.
3. Change designation for R28 to R58 on Schematic.
4. Change designation for D58-13 to CR8-13 on silkscreen.
5. Eliminate waffled ground plane around the #2 holes for the heatsink.
6. Left end of R58 not grounded. (P.C. error)
7. Cut corner of P.C.B. by heatsink for increased airflow.
8. Move feed through above modulator pinout section to left, then expand width of ground plane between shield and modulator ground.
9. Add more feed throughs to ground plane between controller ports.
10. Add additional power diode in series with voltage regulator. This is an additional safeguard about potential heat on voltage regulator, and assumes a lower worst case maximum supply current, of 500mA as it is felt the original 625mA is unrealistic.

Note: REV 3 should not be sent out for fabrication until Joe Fernandez has completed FCC RFI Testing.

EB/mam

cc: A. BECK  
R. YAPO  
J. FALKAR  
D. REMSON  
D. KRAMMER  
J. TILLEY





INTER-OFFICE MEMO

TO:

JOHN DIFALCO

FROM:

JOE TILLEY

DATE: 12/01/81

SUBJECT:

PARTS FOR CINDY PROTO BUILD

Attached you will find a bill of materials for the Cindy Project. Please let me know which items I will not be able to MTO out of stock for the up and coming February 19th 200 piece Proto Type Build. I need this information as quickly as possible to insure a complete parts inventory for the build.

DR/mam

cc: T. Weber  
D. Remson  
J. Lozano  
A. Cheng

Joe - we will set up a kit 2/19/82  
we will set up a kit 2/19/82  
these parts due balance  
Test for these parts The Eng.  
that have o.k.'s  
must be supplied by

D 12/3

cc D DeGelder  
T. Murray  
R/S  
P. DICEO





CONFIDENTIAL

ASSEMBLY TITLE

CINDY PCB ASSEMBLY

P/L CAO18029

PARTS LIST SPECIFICATION

Page 1 of 2

Drawn DEN KRAMER

Checked

Mech. Eng.

Proj. Eng.

Elec. Eng.

Mfg. Eng.

Rev.

13

Rev.	Description	Date	Apprv.	Rev.	Description	Date	Apprv.
13	PROTO RELEASE						

Item	Part Number	Qty.	Description
1	CO17235 <i>OK</i>	1	7405 I.C., U6
2	CO14362 —	1	74 LS32 I.C., U5
3	CO17224 <i>OK</i>	1	74 LS157, U4
4	CO10745 <i>OK</i>	1	6507, U1
5	CO10444 <i>OK</i>	1	TIA, U2
6	CO10750 <i>OK</i>	1	6532 RIOT, U3
7	CO11464 <i>OK</i>	1	4066 I.C., U7
8	CO18026 —	1	TOP SHIELD
9	CO18027 —	1	BOTTOM SHIELD
10			
11	CAO12174 <i>OK</i>	1	5 PIN R.F. MODULATOR B, <i>AI</i>
12	CAO18030 —	1	P.C.B. SUB-ASSEMBLY

PRELIMINARY  
FOR INFORMATION ONLY  
NOT A CONTROLLED DOCUMENT



CONFIDENTIAL

ASSEMBLY TITLE

CINDY PCB SUB-ASSEMBLY

P/L CA018030

PARTS LIST SPECIFICATION

Page 1 of 3

Drawn

Checked

Proj. Eng.

Mech. Eng.

Elec. Eng.

Mfg. Eng.

Rev.

2

Rev.	Description	Date	Apprv.	Rev.	Description	Date	Apprv.
2	PROTO RELEASE						

Item	Part Number	Qty.	Description
1	CO14180-19	9	CAP, CERAMIC AXIAL: .1uf, +20%, X7R, C1,9,18,21,26, 27,32,33,51.
2	CO14180-18	5	" " " .01uf, +20%, X7R, C7, 13,24,49, 50.
3	CO14180-17	16	" " " .001uf, +20%, X7R, C15,17,19,34-46
4	CO14180-04	1	" " " 150pf, +20%, X7R, 50V, C16
5	CO14180-07	2	" " " 470pf, +20%, X7R, 50V, C47,48
6	CO14179-13	1	" " " 20pf, +5%, NPO, 50V, C4
7	CO14179-01	1	" " " 22pf, +5%, NPO, 50V, C12
8	CO14179-05	3	" " " 47pf, +5%, NPO, 50V, C5,10,11
9	CO10821	2	POLYSTYRENE AXIAL: 820pf, 5%, 25V, C8,52
10	CO14353	4	" POLYESTER RADIAL: .068uf, +10%, 100V, C28-31
11	CO14369	2	ELECTROLYTIC RADIAL: 4.7uf, +75-10%, 35VC2, 14
12	CO14392	1	" " " 10uf, +50-10%, 16V, C25
13	CO17517	1	" " " 3300uf, +-10%, 16V, C20
14	CO17885	2	" POLYESTER RADIAL: .1uf, +5%, 100V, C3,22
15			
16			
17			
18	14-5220	3	RESISTOR: 22Ω, 1/4W, 5%, R26,31,52
19	14-5560	1	" 56Ω, 1/4W, 5%, R3
20	14-5521	8	" 220Ω, 1/4W, 5%, R27-30,34,35,49,51
21	14-5102	4	" 1KΩ, 1/4W, 5%, R6,9,16,17
22	14-5122	1	" 1.2KΩ, 1/4W, 5%, R19
23	14-5182	6	" 1.8KΩ, 1/4W, 5%, R36-39,56,57
24	14-5332	2	" 3.3KΩ, 1/4W, 5%, R10,12
25	14-5472	5	" 4.7KΩ, 1/4W, 5%, R2,8,18,11,13
26	14-5912	2	" 9.1KΩ, 1/4W, 5%, R15,24
27	14-5103	14	" 10KΩ, 1/4W, 5%, R32,33,40-48,50,54,55
28	14-5153	1	" 15KΩ, 1/4W, 5%, R5
29	14-5183	3	" 18KΩ, 1/4W, 5%, R14,20,23
30	14-5243	2	" 24KΩ, 1/4W, 5%, R1,25
31	14-5363	1	" 36KΩ, 1/4W, 5%, R21
32	14-5753	1	" 75KΩ, 1/4W, 5%, R22
33	14-5154	1	" 150KΩ, 1/4W, 5%, R4
34	19-411504	1	POTENTIOMETER: 500KΩ, 1/4W, 5%, R7
35			
36			
37			



## PARTS LIST SPECIFICATION

Page 2 of 3

Item	Part Number	Qty.	Description
38	CA015796 <i>OK</i>	1	CARTRIDGE SOCKET ASSEMBLY: J7
39	<del>CO16010</del> <i>OK</i>	1	CRYSTAL: <del>3.579545</del> MHz, <i>+135MHz</i> , HC-18, Y1
40	<i>CO15510. -</i>		<i>3.579575 120Hz.</i>
41			
42	31-1N914 <i>OK</i>	4	DIODE: 1N914, CR2,3,14,15
43	31-1N4001 <i>OK</i>	5	" 1N4001, CR1,4-7
44			
45	<del>CO14799</del> <i>cancel this get ven to</i>	1	HEATSINK <i>✓</i>
46	CO14348 <i>OK</i> <del>CO18277</del>	1	VOLTAGE REGULATOR, 7805 <i>✓ TYPE.</i>
47	72-14065 <i>-</i>	1	SCREW, #4-40x3/8 PHILLIPS
48	75-044 <i>OK</i>	1	WASHER, #4 SPLIT <i>✓</i>
49	75-914C <i>OK</i>	1	NUT, #4 STANDARD <i>✓</i>
50	78-16001 <i>OK</i>	A/R	HEATSINK COMPOUND <i>✓</i>
51	CO15752 <i>OK</i>	1	INDUCTOR: 1.8uH + 5%, L3
52	CO10823 <i>OK</i>	1	" 12 1/2 TURN VARIABLE .85-1.2uH, L2
53	CO14384 <i>OK</i>	5	" , FERRITE BEAD: L1,4-7
54			
55	CO17263 <i>OK</i>	1	JACK, POWER: J5
56	CO10448 <i>OK</i>	4	" 9 PIN "D" SUB. RT. ANGLE, J1-4
57	79-5903 <i>OK</i>	1	" R.F. OUTPUT, J6
58			
59			
60	CO14386-02 <i>OK</i>	3	SOCKRT, I.C. 14 PIN, X5-7
61	CO14386-03 <i>OK</i>	1	" " 16 PIN, X4
62	CO14386-08 <i>OK</i>	1	" " 28 PIN, X1
63	CO14386-09 <i>OK</i>	2	" " 20 PIN, X2,3
64			
65			
66	CO14397-01 <i>OK</i>	1	SWITCH, ROCKER S.P.D.T., S1
67	CO12241 <i>OK</i>	2	" SLIDE S.P.D.T., S10,11
68	CA011620-01 <i>-</i>	8	" MOMENTARY PUSH BUTTON: <i>S2-9</i>
69			
70	<del>CA016015</del> <i>OK</i>	<i>OK</i>	<del>SUB. ASSY. HEAT SINK AND REGULATOR TYPE: 7805</del>
71	33-2N3906 <i>OK</i>	<i>2+</i>	TRANSISTOR: 2N3906, Q1
72	33-2N3563 <i>-</i>	1	" 2N3563, Q2
73			
74	CA011620-02 <i>-</i>	8	ALTERNATE FOR ITEM #68
75	<del>CO16805</del> <i>CO10177-XX</i>	1	ALTERNATE FOR ITEM #39 - <i>HC-33.</i>
76	CO10727 <i>-</i>	1	ALTERNATE FOR ITEM #56
77	CO18028 <i>-</i>	1	P.C.B.



# CONSUMER ENGINEERING

## FIRST ARTICLE AND SAMPLE SUBMITTANCE FORM FOR PROTOTYPE PCB'S

1272 BORREGAS AVENUE  
P.O. BOX 427  
SUNNYVALE, CALIFORNIA 94086  
TELEPHONE: (408) 745-2250  
TELEX: 35-7488

VENDOR ATARI PCB LAYOUT DEPT.

ATARI PART NO. C018029 REV. NO. 3 PROJECT CINDY (2800)<sup>CX</sup>

PART DESCRIPTION PCB FABRICATION ARTWORK - PRE-MFG. INSPECTION

TOOLING: ☐ PROTOTYPE ☐ SOFT ☐ HARD

CAV.	DIE	SAMP.	IDENTIFICATION NOS.									

VENDOR PART NO. OR I.D. \_\_\_\_\_ QTY. RECEIVED \_\_\_\_\_

P.O. NO. \_\_\_\_\_ ITEM NO. \_\_\_\_\_ FIRST ARTICLE RECVD. DATE \_\_\_\_\_

### FIRST ARTICLE APPROVED

DATE

MECH. ENG. \_\_\_\_\_

ELECT. ENG. \_\_\_\_\_

I.D. ENG. \_\_\_\_\_

ENG. COORD. \_\_\_\_\_

CONS. Q. ENG. \_\_\_\_\_

1st ART. COORD. \_\_\_\_\_

OTHER \_\_\_\_\_

### FIRST ARTICLE REJECTED

DATE

MECH. ENG. \_\_\_\_\_

ELECT. ENG. \_\_\_\_\_

I.D. ENG. \_\_\_\_\_

ENG. COORD. Dan Kramer

CONS. Q. ENG. \_\_\_\_\_

1st ART. COORD. \_\_\_\_\_

OTHER \_\_\_\_\_

COMMENTS/EVALUATION ① ADD FILLETS FOR ALL PADS FOR XU1-XU7, AS FOR  
CARTRIDGE SOCKET PADS ② CHANGE FERRITE BEAD REF. DESIG'S  
AS FOLLOWS: FB1 TO L4; FB2 TO L5; FB3 TO L6; FB4 TO L7; FB5 TO L8  
③ SHOW ALL REF. DESIG'S ON SILKSCREEN OUTSIDE OF COMPONENT  
OUTLINE WHEREVER POSSIBLE (FACILITATES VISUAL INSPECTION  
WHEN BOARD IS LOADED) ④ MAKE GND. PLANE SOLID AROUND THE  
2 MOUNTING PADS FOR THE HEATSINK (NOT WAFFLED)

COPIES TO:

☐ ACCOUNTS PAYABLE

☐ ENGINEERING

☐ MANUFACTURING

☐ INDUSTRIAL DESIGN

☐ PURCHASING

☐ VENDOR

☐ QUALITY ASSURANCE

FIRST ARTICLE REPORT COPIES TO: ENGINEERING; MANUFACTURING; QUALITY ASSURANCE; VENDOR





CONFIDENTIAL

ASSEMBLY TITLE

CINDY PCB SUB-ASSEMBLY

P/L CAO18030

## PARTS LIST SPECIFICATION

Page 1 of 3

Drawn *DAWKRAMER 1/20/82*

Checked

Mech. Eng.

Proj. Eng.

Elec. Eng.

Mfg. Eng.

Rev.

32A

Rev.	Description	Date	Apprv.	Rev.	Description	Date	Apprv.
<del>2A</del>	PROTO RELEASE						
3							

PRELIMINARY

FOR INFORMATION ONLY

NOT A CONTROLLED DOCUMENT

Item	Part Number	Qty.	Description
1	CO14180-19	9	CAP, CERAMIC AXIAL: .1uf, + 20%, X7R, C1,9,18,21,26,27,34,35,51.
2	CO14180-18	6	" " " .01uf, +20%, X7R, C5,7,13,24,49,50.
3	CO14180-17	14	" " " .001uf, +20%, X7R, C15,17,19,36-46.
4	CO14180-04	1	" " " 150pf, +20%, X7R, 50V, C16
5	CO14180-07	2	" " " 470pf, +20%, X7R, 50V, C47,48
6	CO14179-01	1	" " " 22pf, +5%, NPO, 50V, C12
7	CO14179-05	1	" " " 47pf, +5%, NPO, 50V, C11
8	CO14179-19	1	" " " 100pf, +5%, NPO, 50V, C10
9	CO14179-22	1	" " " 10pf, +5%, NPO, 50V, C4
10	CO18261	2	" POLYSTYRENE AXIAL AUTO INSERTABLE: 820pf, 5%, N150, 25V, C8,52.
11	CO14353	4	" POLYESTER RADIAL: .068uf, +10%, 100V, C28-31
12	CO17885	1	" " " .1uf, +5%, 100V, C22
13	CO10394	1	" " " .22uf, +5%, 100V, C3
14	CO14369	2	" ELECTROLYTIC RADIAL: 4.7uf, +75-10%, 35V, C2,14
15	CO14392	1	" " " 10uf, +50-10%, 16V, C25
16	CO17517	1	" " " 3300uf, +10%, 16V, C20
17			
18			
19	14-5220	3	RESISTOR: 22Ω, 1/4W, 5%, R26,31,52
20	14-5221	7	" 220Ω, 1/4W, 5%, R27,30,34,35,51,53,5
21	14-5621	1	" 620Ω, 1/4W, 5%, R19
22	14-5102	4	" 1KΩ, 1/4W, 5%, R6,9,16,17
23	14-5182	6	" 1.8KΩ, 1/4W, 5%, R36-39,56,57
24	14-5272	1	" 2.7KΩ, 1/4W, 5%, R18
25	14-5332	2	" 3.3KΩ, 1/4W, 5%, R10,12
26	14-5472	4	" 4.7KΩ, 1/4W, 5%, R2,8,11,13
27	14-5912	1	" 9.1KΩ, 1/4W, 5%, R15
28	14-5103	15	" 10KΩ, 1/4W, 5%, R24,32,33,40-48,50,54,55
29	14-5133	2	" 13KΩ, 1/4W, 5%, R20,23
30	14-5183	1	" 18KΩ, 1/4W, 5%, R14
31	14-5243	3	" 24KΩ, 1/4W, 5%, R1,21,25
32	14-5563	1	" 56KΩ, 1/4W, 5%, R22
33	19-411504	1	POTENTIOMETER: 500KΩ, 1/4W, 5%, R7



## PARTS LIST SPECIFICATION

Page 2 of 3

Item	Part Number	Qty.	Description
34	14-5910	1	RESISTOR: 91Ω, 1/4W, 5%, R3
35	14-5241	1	" 240Ω, 1/4W, 5%, R4
36	14-5222	1	" 2.2KΩ, 1/4W, 5%, R58
37			
38			
39			
40	CA015796	1	CARTRIDGE SOCKET ASSEMBLY: J7
41	CO15510	1	CRYSTAL: 3.579575 MHz, ±120HZ, HC 18, Y1
42			
43	31-1N914	4	DIODE: 1N914, CR2,3,14,15
44	31-1N4001	6-7	" 1N4001, CR1,4-7,16,17
45	CO14776	6	" LIGHT EMITTING, CR8-13
46	CO18277	1	HEATSINK
47	CO14348	1	VOLTAGE REGULATOR, 7805, VR1
48	72-1406S	1	SCREW, #4-40x3/8 PHILLIPS PANHEAD
49	75-044	1	WASHER, #4 SPLIT
50	75-914C	1	NUT, #4 STANDARD
51	78-16001	A/R	HEATSINK COMPOUND
52	CO15752	1	INDUCTOR: 1.8uH + 5%, L3
53	CO10823	1	" 12 1/2 TURN VARIABLE .85-1.2uH, L2
54	CO14384	5	" FERRITE BEAD: L4-8
55			
56	CO17263	1	JACK, POWER: J5
57	CO10448	4	" 9 PIN "D" SUB. RT. ANGLE, J1-4
58	79-5903	1	" R.F. OUTPUT, J6
59			
60	CO14386-02	3	SOCKET, I.C. 14 PIN, X5-7
61	CO14386-03	1	" " 16 PIN, X4
62	CO14386-08	1	" " 28 PIN, X1
63	CO14386-09	2	" " 40 PIN, X2,3
64			
65	CO14397-02	1	SWITCH, ROCKER S.P.D.T., S1
66	CO12241	2	" SLIDE S.P.D.T., S10,11
67	CA011620-01	8	" MOMENTARY PUSH BUTTON S.P.S.T., S2-9
68			
69	33-2N3906	2	TRANSISTOR: 2N3906, Q1,3
70	34-2N3563	1	" 2N2563, Q2
71			
72	CA011620-02	8	ALTERNATE FOR ITEM #67
73	CO10177-XX	1	ALTERNATE FOR ITEM #41



## PARTS LIST SPECIFICATION

Page 3 of 3

Item	Part Number	Qty.	Description
74	CO10727 CO12242	1 2	ALTERNATE FOR ITEM #57 ALTERNATE FOR ITEM #66
75	CO18028	1	P.C.B.

## PARTS LIST SPECIFICATION

Page 1 of 1

Drawn DEN KRAMER

Checked

Mech. Eng.

Proj. Eng.

Elec. Eng.

Mfg. Eng.

Rev.

1

CONFIDENTIAL

Rev.	Description	Date	Apprv.	Rev.	Description	Date	Apprv.
1	PROTO RELEASE						

Item	Part Number	Qty.	Description
1	CO17235	1	7405 I.C. U6
2	CO14362	1	74 LS32 I.C. U5
3	CO17224	1	74 LS157 U4
4	CO10745	1	6507 U1
5	CO10444	1	TIA U2
6	CO10750	1	6532 RIOT U3
7	CO11464	1	4066 I.C. U7
8			
9			
10	2 SHIELDS NOT LISTED		
11	CA012174	1	5 PIN R.F. MODULATOR B, AI BOARDS
12	CA018030	1	P.C.B. SUB-ASSEMBLY

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OCT 7 1981



## PARTS LIST SPECIFICATION

Page 3 of 4

Item	Part Number	Qty.	Description
63	0018028	1	P.C.B.

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OCT 7 1981

## PARTS LIST SPECIFICATION

Page 2 of 4

Item	Part Number	Qty.	Description
38	CR015796	1	CARD EDGE SOCKET ASSEMBLY - J7
39			
40	CO16010	1	CRYSTAL: 3.579545 KHz - Y1
41			
42			
43	31-1N914	4	DIODE: 1N914 - CR 2, 3, 14, 15
44	31-1N4001	5	" 1N4001 - CR 1, 4-7
45	CO14776	6	" LIGHT EMITTING 08-13
46	CO18023	3	" LED SUPPORT NOT USED ACC TO HUGHES LEE
47			
48			
49			
50	CO14384	54	FERRITE BEAD - FB1-5
51			
52			
53	78-16001	A/R	HEATSINK COMPOUND
54			
55			
56	CO15752	1	INDUCTOR: 1.8uH - L3
57	CO10823	1	" 12 1/2 TURN VARIABLE - L2
58			
59			
60	CO17263	1	JACK, POWER: - J5
61	CO10448	4	" 9 PIN "D" SUB. RT. ANGLE - J1-4
62	79-5903	1	" R.F. OUTPUT - J6
63			
64			
65	CO14386-02	3	SOCKET, I.C.: 14 PIN - X05-7
66	CO14386-03	1	" " 16 PIN - X04
67	CO14386-08	1	" " 28 PIN - X01
68	CO14386-09	2	" " 40 PIN - X02, 3
69			
70			
71	CO14397-XX	1	SWITCH, ROCKER: - S1
72	CO12241	2	" SLIDE: - S10, 11
73	CA011620	8	" MOMENTARY PUSH BUTTON: - S2-9
74			
75			
76	33-2N3906	1	TRANSISTOR: 2N3906 - Q1
77	33-2N3653	1	" 2N3653 - Q2
78			
79			
80	CO16805	1	ALTERNATE FOR ITEM #40
81	CO10727	1	ALTERNATE FOR ITEM #61
82			

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OCT 7 1981



## PARTS LIST SPECIFICATION

Page 1 of 4

Drawn LBN KRAMER

Checked

Mech. Eng.

Proj. Eng.

Elec. Eng.

Rev.

1

Mfg. Eng.

CONFIDENTIAL

Rev.	Description	Date	Apprv.	Rev.	Description	Date	Apprv.
1	PHOTO RELEASE						

Item	Part Number	Qty.	Description
1	CO14181-03	11	CAP, CERAMIC AXIAL: .1uf, +80-20% <i>C1, X, 9, 18, 21, X,</i>
2	CO14181-02	5	" " " .01uf, " <i>26, 27, 32, 33, 51</i>
3	CO14181-01	16	" " " .001uf, " <i>C7, 13, 24, 49, 50</i>
4	CO14179-13	1	" " " 20pf, +5%, NPO, 50V-C4 <i>C15, 17, 19, 34-46</i>
5	CO14179-01	1	" " " 22pf, +5%, NPO, 50V-C12
6	CO14179-05	2	" " " 47pf, +5%, NPO, 50V-C5, 10, 11
7	CO14180-04	1	" " " 150pf, +20%, X7R, 50V-C16
8	CO14180-07	2	" " " 470pf, +20%, X7R, 50V-C47, 48
9	CO10821	2	" POLYSTYRENE: 820pf, 5%, 25V-C8, 52
10	CO14353	4	" EPOXY DIPPED: .068uf, +10%, 100V-C28-31
11	CO14372	2	" ELECTROLYTIC <del>AXIAL</del> <i>RAD</i> 4.7uf, +75-10%, 35V-C14, 2
12	CO14371	1	" " <i>RAD</i> 10uf, 16V-C25
13	CO17517	1	" " <i>RAD</i> 3300uf, 16V-C20
14	CO17885	2	" MYLAR RADIAL: .1uf, 5%, 100V-C3, 22
15			
16			
17			
18	14-5220	3	RESISTOR: 22Ω, 1/4W, 5%-R26, 31, 52
19	14-5560	1	" 56Ω, 1/4W, 5%-R3
20	14-5521	8	" 220Ω, 1/4W, 5%-R27-30, 34, 35, 49, 51
21	14-5102	4	" 1kΩ, 1/4W, 5%-R6, 9, 16, 17
22	14-5122	1	" 1.2kΩ, 1/4W, 5%-R19
23	14-5182	4	" 1.8kΩ, 1/4W, 5%-R36-39, 56, 57
24	14-5332	2	" 3.3kΩ, 1/4W, 5%-R10-13
25	14-5472	5	" 4.7kΩ, 1/4W, 5%-R2, 8, 18
26	14-5912	2	" 9.1kΩ, 1/4W, 5%-R15, 24
27	14-5103	12	" 10kΩ, 1/4W, 5%-R32, 33, 40-48, 50, 54, 55
28	14-5153	1	" 15kΩ, 1/4W, 5%-R5
29	14-5183	3	" 18kΩ, 1/4W, 5%-R14, 20, 23
30	14-5243	2	" 24kΩ, 1/4W, 5%-R1, 25
31	14-5363	1	" 36kΩ, 1/4W, 5%-R21
32	14-5753	1	" 75kΩ, 1/4W, 5%-R22
33	14-5154	1	" 150kΩ, 1/4W, 5%-R4
34	19-411504	1	POTENTIOMETER: 500kΩ, 1/4W, 5%-R7
35			
36			
37			

PRELIMINARY  
FOR INFORMATION ONLY

OCT 7 1981

# Inter Office Memo



Consumer Electronics Division

To: Hans Kramer

From: Dennis DeGhelder

Subject: Cindy Proto & Pilot Builds

Date: 1/13/82

The list below represents Board Components which the Materials Group cannot provide for the Cindy Proto Build of 25 and the Pilot Build of 200. This list is based on the Rev. 2A Proto Release, and assumes there are no changes in the Chip Kit CA018029 since no update was published.

P/N

DESCRIPTION

CO14180-19	CAP, Ceramic, Axial, .1 uf
CO14180-18	Cap, Ceramic, Axial, .01 uf
CO14180-17	Cap, Ceramic, Axial, .001 uf
CO18261	Cap, Polystyrene, Axial, 820 pf
CO17885	Cap, Polyester, Radial, .1 uf
14-5621	Res- 620 Ohm
14-5133	Res- 13K Ohm
CO15510	Crystal

Note: We do have alternate-CO10177. Can we use this?

CO18277	Heatsink
CA011620-01; -02	Momentary Switch (-02 is Alt.)

NEED TO ORDER →

BEING MADE OUTSIDE? →

In addition to the above, you will find that the socket assy CA015796 will be issued as piece parts, and CO18027/CO18028, Shields, will not be provided.

Any problems, please call X5400.

Thank you.

A handwritten signature in cursive script that reads 'Dennis DeGhelder'.

Dennis DeGhelder

CC: J.DiFalco

D.Kramer

W.Rader

J.Sommers

J.Tilley

D.Vinnage

L.LaMar

T.Murray

DD:jd





ASSEMBLY TITLE

CINDY PCB SUB-ASSEMBLY

P/L CA018030

## PARTS LIST SPECIFICATION

Page 1 of 2

Drawn

Checked

Mech. Eng.

Proj. Eng.

Elec. Eng.

Rev.

Mfg. Eng.

2A

Rev.	Description	Date	Apprv.	Rev.	Description	Date	Apprv.
2A	PROTO RELEASE						

Item	Part Number	Qty.	Description
1	CO14180-19	9	CAP, CERAMIC AXIAL: .1uf, $\pm$ 20%, X7R, C1,9,18,21,26,27,34,35,51.
2	CO14180-18	6	" " " .01uf, $\pm$ 20%, X7R, C5,7,13,24,49,50.
3	CO14180-17	14	" " " .001uf, $\pm$ 20%, X7R, C15,17,19,36-46.
4	CO14180-04	1	" " " 150pf, $\pm$ 20%, X7R, 50V, C16
5	CO14180-07	2	" " " 470pf, $\pm$ 20%, X7R, 50V, C47,48
6	<del>CO14179-01</del>	<del>1</del>	<del>" " " 22pf, <math>\pm</math> 5%, NPO, 50V, C12</del>
7	CO14179-05	1	" " " 47pf, $\pm$ 5%, NPO, 50V, C11
8	CO14179-19	1	" " " 100pf, $\pm$ 5%, NPO, 50V, C10
9	CO14179-22	1	" " " 10pf, $\pm$ 5%, NPO, 50V, C4
10	CO18261	2	" POLYSTYRENE AXIAL AUTO INSERTABLE: 820pf, 5%, N150, 25V, C8,52.
11	CO14353	4	" POLYESTER RADIAL: .068uf, $\pm$ 10%, 100V, C28-31
12	CO17885	1	" " " .1uf, $\pm$ 5%, 100V, C22
13	CO10394	1	" " " .22uf, $\pm$ 5%, 100V, C3
14	CO14369	2	" ELECTROLYTIC RADIAL: 4.7uf, $\pm$ 75-10%, 35V, C2,14
15	CO14392	1	" " " 10uf, $\pm$ 50-10%, 16V, C25
16	CO17517	1	" " " 3300uf, $\pm$ 10%, 16V, C20
17			
18			
19	14-5220	3	RESISTOR: 22 $\Omega$ , 1/4W, 5%, R26,31,52
20	14-5221	7	" 220 $\Omega$ , 1/4W, 5%, R27,30,34,35,51,53,5
21	14-5621	1	" 620 $\Omega$ , 1/4W, 5%, R19
22	14-5102	4	" 1K $\Omega$ , 1/4W, 5%, R6,9,16,17
23	14-5182	6	" 1.8K $\Omega$ , 1/4W, 5%, R36-39,56,57
24	14-5272	1	" 2.7K $\Omega$ , 1/4W, 5%, R18
25	14-5332	2	" 3.3K $\Omega$ , 1/4W, 5%, R10,12
26	14-5472	4	" 4.7K $\Omega$ , 1/4W, 5%, R2,8,11,13
27	14-5912	1	" 9.1K $\Omega$ , 1/4W, 5%, R15
28	14-5103	15	" 10K $\Omega$ , 1/4W, 5%, R24,32,33,40-48,50,54,55
29	14-5133	2	" 13K $\Omega$ , 1/4W, 5%, R20,23
30	14-5183	1	" 18K $\Omega$ , 1/4W, 5%, R14
31	14-5243	3	" 24K $\Omega$ , 1/4W, 5%, R1,21,25
32	14-5562-5563	1	" 56K $\Omega$ , 1/4W, 5%, R22
33	19-411504	1	POTENTIOMETER: 500K $\Omega$ , 1/4W, 5%, R7

## PARTS LIST SPECIFICATION

Page 2 of

Item	Part Number	Qty.	Description
34	14-5910	1	RESISTOR: 91Ω, 1/4W, 5%, R3
35	14-5241	1	" 240Ω, 1/4W, 5%, R4
36	14-5222	1	" 2.2KΩ, 1/4W, 5%, R58
37			
38			
39			
40	CA015796	1	CARTRIDGE SOCKET ASSEMBLY: J7
41	<del>CO16010</del>	1	CRYSTAL: <del>3.579545</del> MHz, <del>±135Hz</del> , HC 18, Y1
42	CO15510		3.579575 ±120Hz.
43	31-1N914	4	DIODE: 1N914, CR2,3,14,15
44	31-1N4001	87	" 1N4001, CR1, <del>4-7, 16, 17</del>
45	CO14776	6	" LIGHT EMITTING, CR8-13
46	CO18277	1	HEATSINK
47	CO14348	1	VOLTAGE REGULATOR, 7805, VR1
48	72-1406S	1	SCREW, #4-40x3/8 PHILLIPS PANHEAD
49	75-044	1	WASHER, #4 SPLIT
50	75-914C	1	NUT, #4 STANDARD
51	78-16001	A/R	HEATSINK COMPOUND
52	CO15752	1	INDUCTOR: 1.8uH + 5%, L3
53	CO10823	1	" 12 1/2 TURN VARIABLE .85-1.2uH, L2
54	CO14384	5	" FERRITE BEAD: L4-8
55			
56	CO17263	1	JACK, POWER: J5
57	CO10448	4	" 9 PIN "D" SUB. RT. ANGLE, J1-4
58	79-5903	1	" R.F. OUTPUT, J6
59			
60	CO14386-02	3	SOCKET, I.C. 14 PIN, X5-7
61	CO14386-03	1	" " 16 PIN, X4
62	CO14386-08	1	" " 28 PIN, X1
63	CO14386-09	2	" " 40 PIN, X2,3
64			
65	CO14397-02	1	SWITCH, ROCKER S.P.D.T., S1
66	CO12241	2	" SLIDE S.P.D.T., S10,11
67	CA011620-01	8	" MOMENTARY PUSH BUTTON S.P.D.T., S2-9
68			S.P.S.T.
69	33-2N3906	2	TRANSISTOR: 2N3906, Q1,3
70	34-2N3563	1	" 2N2563, Q2
71			
72	CA011620-02	8	ALTERNATE FOR ITEM #67
73	<del>CO16805</del>	1	ALTERNATE FOR ITEM #41
	CO10177-XX		



## PARTS LIST SPECIFICATION

Page of

Item	Part Number	Qty.	Description
74	CO10727	1	ALTERNATE FOR ITEM #57
75	CO18028	1	P.C.B.



INTER-OFFICE MEMO

RECEIVED

DEC 02 1981

TO: DAVE REMSON

DAVE REMSON

FROM: JOE TILLEY

DATE: 12/02/81

SUBJECT: PRODUCTION TEST SPECIFICATIONS FOR CINDY 2800

---

Input AC Power: 900 ma AC MAX. , 600 ma AC MIN.  
Sound Oscillator Frequency: 4.50 MHz  $\pm$  .006MHz  
RF Out, Channel 2: 55.25 MHz  $\pm$  .600MHz  
RF Out, Channel 3: 61.25 MHz  $\pm$  .200 MHz  
RF Out Voltage; Channel 2&3: 1.5 MIN. MV, 2.5 MAX. MV. R.F.  
Pot Channel Timing w/100K Resistor: 5 m sec MIN., 10 m sec MAX.

Note: Cindy is identical to Stella with the exceptions that Cindy has two extra controller parts for use with paddle controllers, and Cindy requires an AC Power Input, where Stella required DC Power.

JT/mam







# CONSUMER ENGINEERING

## FIRST ARTICLE AND SAMPLE SUBMITTANCE FORM

1272 BORREGAS AVENUE  
P.O. BOX 427  
SUNNYVALE, CALIFORNIA 94086  
TELEPHONE: (408) 745-2250  
TELEX: 35-7488

VENDOR \_\_\_\_\_

ATARI PART NO. C018029 REV. NO. 1A PROJECT CINDY

PART DESCRIPTION P.C. BOARD

TOOLING: ☐ PROTOTYPE ☐ SOFT ☐ HARD

CAV.	DIE	SAMP.	IDENTIFICATION NOS.									

VENDOR PART NO. OR I.D. \_\_\_\_\_ QTY. RECEIVED \_\_\_\_\_

P.O. NO. \_\_\_\_\_ ITEM NO. \_\_\_\_\_ FIRST ARTICLE RECVD. DATE OCT. 27, '81

### FIRST ARTICLE APPROVED

DATE

MECH. ENG. \_\_\_\_\_

ELECT. ENG. \_\_\_\_\_

I.D. ENG. \_\_\_\_\_

ENG. COORD. \_\_\_\_\_

CONS. Q. ENG. \_\_\_\_\_

OTHER \_\_\_\_\_

### FIRST ARTICLE REJECTED

DATE

MECH. ENG. \_\_\_\_\_

ELECT. ENG. Dan Khamer / Joe Tilley

I.D. ENG. \_\_\_\_\_

ENG. COORD. \_\_\_\_\_

CONS. Q. ENG. \_\_\_\_\_

OTHER \_\_\_\_\_

COMMENTS/EVALUATION (1) U6 PINS 8 & 9 SHOULD BE REVERSED  
(2) CONNECTIONS REVERSED FOR WIPER & GROUND SIDE OF RT, SPOK PO  
(3) PAD FOR GND. CONNECTION OF C29 RADIAL LEAD NOT GROUNDED (FLOATING)  
(4) R31-C33 NETWORK SHOULD BE CONNECTED TO S7 (RIGHT "B" SWITCH)  
(5) R26-C32 NETWORK SHOULD BE CONNECTED TO S3 (LEFT "B" SWITCH)  
(6) ENLARGE PADS ON CIRCUIT SIDE FOR L.E.D.'S - TOO SMALL TO SOLDER WELL  
(7) ELIMINATE STRIPS BETWEEN CIRCUIT-SIDE TRACES UNDER RF MODULE - THEY CAN  
CAUSE UNWANTED CAPACITIVE COUPLING

COPIES TO: ☐ ACCOUNTS PAYABLE ☐ ENGINEERING ☐ MANUFACTURING ☐ INDUSTRIAL DESIGN  
☐ PURCHASING ☐ VENDOR ☐ QUALITY ASSURANCE

FIRST ARTICLE REPORT COPIES TO: ENGINEERING; MANUFACTURING; QUALITY ASSURANCE; VENDOR



PRELIMINARY!

ASSEMBLY TITLE / <u>CINDY PCB</u>		P/L
PARTS LIST SPECIFICATION		Page <u>1</u> of <u>    </u>
Drawn <u>D. KRAMER 9/9/81</u>	NEXT ASSY.	
Checked	Mech. Eng.	
Proj. Eng.	Elec. Eng.	Rev.
COMP. ENG.	Mfg. Eng.	

Rev.	Description	Date	Apprv.	Rev.	Description	Date	Apprv.

Item	Part Number	Qty.	Description
1	CO14181-03	11	CAP., CERAMIC AXIAL, .1 $\mu$ f
2	CO14181-02	5	CAP, " " , .01 $\mu$ f
3	CO14181-01	16	CAP, " " , .001 $\mu$ f
4	CO14179-13	1	CAP, " " , 20pf
5	CO14179-01	1	CAP, " " , 22pf
6	CO14179-05	2	CAP, " " , 47pf
7	CO14180-04	1	CAP, " " , 150pf
8	CO14180-07	2	CAP, " " , 470pf
9	CO10821	2	CAP, POLYSTYRENE, 820pf
10	CO14353	4	CAP, EPOXY DIPPED, .068 $\mu$ f
11	CO14369	2	CAP, ELECTROLYTIC, 4.7 $\mu$ f
12		1	CAP, " , 10 $\mu$ f
13		1	CAP, " , 3300 $\mu$ f
14		1	CAP, " , 1 $\mu$ f
15	21-101104	2	CAP, POLY FILM, .1 $\mu$ f
16			
17	14-5220	3	RESISTOR, 1/4 W CARBON, 22 $\Omega$
18	14-5560	1	RESISTOR, " " , 56
19	14-5221	8	RESISTOR, " " , 220
20	14-5102	4	RESISTOR, " " , 1k



PRELIMINARY!

ASSEMBLY TITLE

CINDY PCB

P/L

PARTS LIST SPECIFICATION

Page 2 of \_\_\_\_

Drawn D. KRAMER 9/9/81 NEXT ASSY.

Checked

Mech. Eng.

Proj. Eng.

Elec. Eng.

Rev.

COMP. ENG.

Mfg. Eng.

Rev.	Description	Date	Apprv.	Rev.	Description	Date	Apprv.

Item	Part Number	Qty.	Description
21	14-5122	1	RESISTOR, 1/4 W. CARBON, 1.2k $\Omega$
22	14-5182	4	RESISTOR, " " , 1.8k
23	14-5332	4	RESISTOR, " " , 3.3k
24	14-5472	3	RESISTOR, " " , 4.7k
25	14-5912	2	RESISTOR, " " , 9.1k
26	14-5103	10	RESISTOR, " " , 10k
27	14-5153	1	RESISTOR, " " , 15k
28	14-5183	3	RESISTOR, " " , 18k
29	14-5243	2	RESISTOR, " " , 24k
30	14-5363	1	RESISTOR, " " , 36k
31	14-5753	1	RESISTOR, " " , 75k
32	14-5154	1	RESISTOR, " " , 150k
33	19-411504	1	POTENTIOMETER, 500k
34			
35			
36	31-IN914	2	DIODE, 1N914
37	31-IN4001	5	DIODE, 1N4001
38		6	DIODE, LIGHT EMITTING
39	33-2N3906	1	TRANSISTOR, 2N3906
40	33-2N3653	1	TRANSISTOR, 2N3653







PRELIMINARY

ASSEMBLY TITLE

CINDY PCB

P/L

PARTS LIST SPECIFICATION

Page 3 of

Drawn D. KRAMER 9/9/81

NEXT ASSY.

Checked

Mech. Eng.

Proj. Eng.

Elec. Eng.

Rev.

COMP. ENG.

Mfg. Eng.

Rev.	Description	Date	Apprv.	Rev.	Description	Date	Apprv.

Item	Part Number	Qty.	Description
41	C015752	1	INDUCTOR, 1.8 $\mu$ H
42		1	INDUCTOR, 15 $\mu$ H
43	C010823	1	INDUCTOR, 12 1/2 TURN VARIABLE
44	C014384	4	FERRITE BEAD
45	C016010	1	CRYSTAL, 3.579545 MHz
46	C016805	-	ALTERNATE FOR ITEM #45
47	C010819	1	VOLTAGE REGULATOR, 78 MOS
48	82-AL604	1	SCREW, #6 x .25", TYPE BT. PHILLIPS
49	72-1406C	-	SCREW, #4 x .375 PHIL. P-HEAD CRES.
50	75-044	-	WASHER, #4 SPLIT LOCK
51	75-914C	-	NUT, #4 MACHINE HEX
52	C014386-02	3	14 PIN I.C. SOCKET
53	C014386-03	1	16 PIN I.C. SOCKET
54	C014386-08	1	28 PIN I.C. SOCKET
55	C014386-09	2	40 PIN I.C. SOCKET
56			
57			
58			
59	78-16001	A/R	HEATSINK COMPOUND
60			

ALTERNATE  
FOR ITEM  
#48



PRELIMINARY

ASSEMBLY TITLE	CINDY PCB	P/L
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PARTS LIST SPECIFICATION		Page 4 of 4
Drawn	D. KRAMER 9/9/81	NEXT ASSY.
Checked		Mech. Eng.
Proj. Eng.		Elec. Eng.
COMP. ENG.		Mfg. Eng.

Rev.	Description	Date	Apprv.	Rev.	Description	Date	Apprv.

Item	Part Number	Qty.	Description
61		1	POWER JACK
62	C010448	4	CONTROLLER JACK, 9 PIN MALE
63	C010727		" " , ALTERNATE FOR #62
64	79-5903	1	RF OUTPUT JACK
65			CARTRIDGE SOCKET ASSEMBLY
66			PRINTED CIRCUIT BOARD
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80			



PRELIMINARY

ASSEMBLY TITLE

/CINOY FINAL ASSY P/L

PARTS LIST SPECIFICATION

Page 1 of

Drawn

NEXT ASSY.

Checked

Mech. Eng.

Proj. Eng.

Elec. Eng.

Rev.

COMP. ENG.

Mfg. Eng.

Rev.	Description	Date	Apprv.	Rev.	Description	Date	Apprv.

Item	Part Number	Qty.	Description
1		1	PCB ASSEMBLY
2	CA012174	1	5 PIN R.F. MODULATOR
3	CO17235	1	7405 I.C.
4	CO14362	1	74LS32 I.C.
5	CO17244	1	74LS157
6	CO10745	1	6507 MPU
7	CO10444	1	TIA
8	CO10750	1	6532 PIA
9	CO11464	1	4066 I.C.
10		1	ROCKER SWITCH (ON-OFF)
11		2	SLIDE SWITCH (COL-BW, CH 2-3)
12		6	MOMENTARY PUSH BUTTON SWITCH (NORM-PADDLE, DIFF. A-B, L & R)



## CINDY PARTS LIST DISTRIBUTION

✓ JOHN FALKAR	- 1 -	P.C. LAYOUT
BRAD SEVILLE	- 1 -	HUMBOLDT
GARY CANOVA	- 1 -	BERNARDO
JOE TILLEY	- 1 -	ENG.
✓ ME	- 1 -	ENG.
✓ ADOLFO	- 1 -	COST. EST.
✓ BOB ROUSMAHA	- 1 -	COMPONENTS
HUGH LEE	- 1 -	MECH.
EXTRAS	- 1 -	

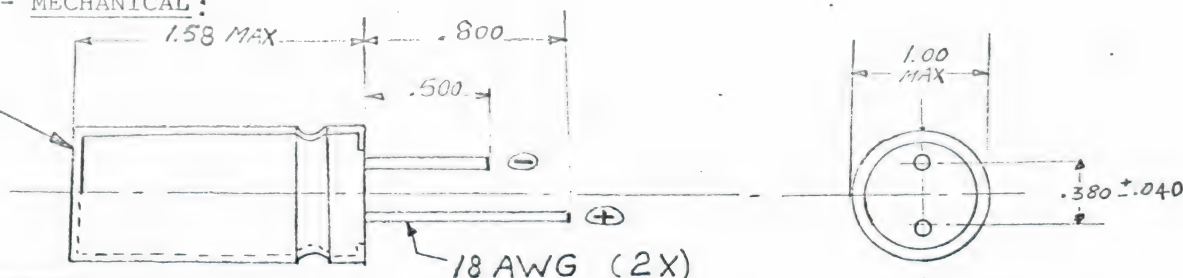
5-11-82 SANTA CLARA

# ALUMINUM ELECTROLYTIC CAPACITOR: 3300 $\mu$ F, 16V

## SPECIFICATIONS:

### 1- MECHANICAL:

FULL BODY  
INSULATION  
SLEEVE



### NOTES:

MARKING: CAPACITANCE VALUE, WVDC, POLARITY, MANUFACTURER'S NAME AND TEMPERATURE RATING.

SOLDERABILITY: SHALL WITHSTAND IMMERSION OF LEADS IN 270°C SOLDER TO WITHIN .125" OF THE BODY, FOR 3 SECONDS MIN.

CONTAIN SEAL TEST: (AS PER MANUFACTURER'S SPECIFICATIONS).

CAPACITOR SHALL NOT SHOW ANY EVIDENCE OF ELECTROLYTE LEAKAGE AT RECEIVING NOR AFTER INSTALLATION.

### 2- ELECTRICAL: (@ T<sub>A</sub> = 25°C)

CAPACITANCE @ 120 HZ - 1V RMS:

3300 $\mu$ F

TOLERANCE:

-10% TO +75%

WVDC:

16 V

MAX SURGE VOLTAGE:

20 V

MAX DC LEAKAGE CURRENT @ 16V:

1200 $\mu$ A

MAX ESR @ 120 HZ:

.0307  $\Omega$

MAX ESR @ 100 KHZ:

.0147  $\Omega$

DIELECTRIC STRENGTH: (FOR 1 MINUTE)

2000 V

INSULATION RESISTANCE: MIN.

100 Megohms

DISSIPATION FACTOR @ 1VRMS, 120HZ: MAX.

0.25

RIPPEL CURRENT @ 120 HZ, 85°C: MAX.

1.07 ARMS.

OPERATING TEMPERATURE:

-55°C TO 105°C

REVISIONS	DATE	APPROVED
1	4/18/81	A
PROTO RELEASE		

SHEET 1 OF 1

ATARI

ALUMINUM ELECTROLYTIC CAPACITOR: 3300 $\mu$ F

DRAWN BY E. BRISMAZ	ENGINEER, MGR. J. SCOTT	MATERIAL
CHECKED J. SCOTT	QUAL ASSURANCE	DRAWING NO.
ENGINEER J. SCOTT	MFG. ENGINEER	COL7517



IS LED STANDOFF ON PCB ASS'Y?

IS C014372 AXIAL? YES

VOLTAGE RATING ON C017793 35V

ARE SWITCHES WAVE-SOLDERABLE? YES

WHAT IS NO FOR 

PCB SUB-ASSY	PCB ALONE
--------------	-----------

SCH. C A018029 <sup>MMR</sup> ←

CX018028

PTS LIST C A018030  
(SUB ASS'Y)



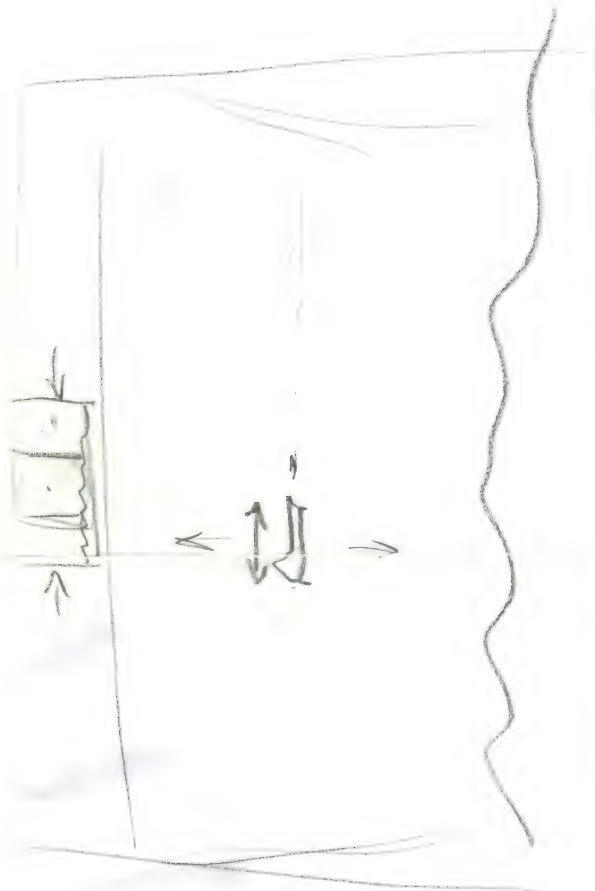


GARY CANOVA  
NEEDS PARTS LIST,  
BD. FAB LAYOUT ●  
(STUFF DIAGRAM)  
SHOWING SHIELD  
LOCATION

455 GERNARDO

961-2285 x57

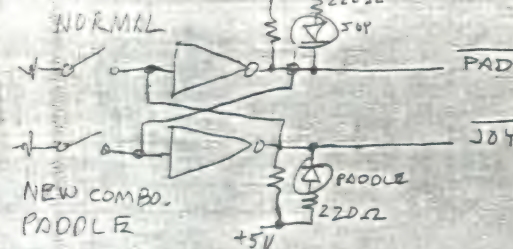
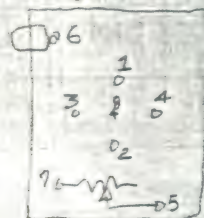
IND. ENG.



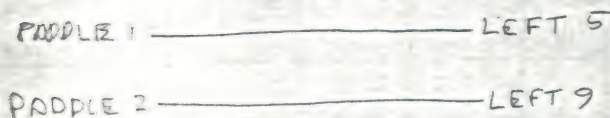
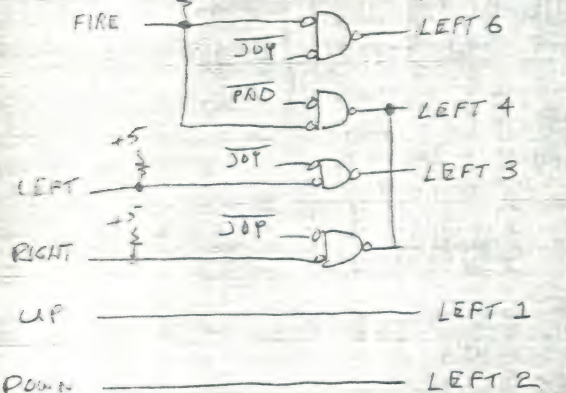
# SEARS ARCADE

6/24/81  
RCM 5/29/81

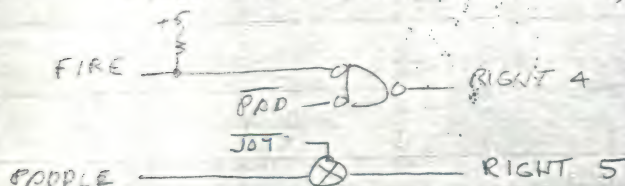
## COMBO. CONTROLLER WIRING



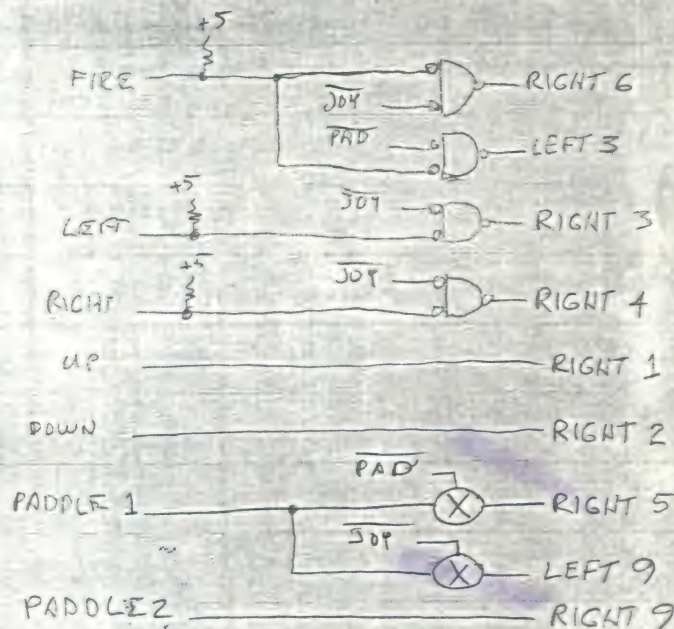
LEFT JACK ← (COMBO. CONTROL OR ALL OLD STYLES BUT NOT MIXED)



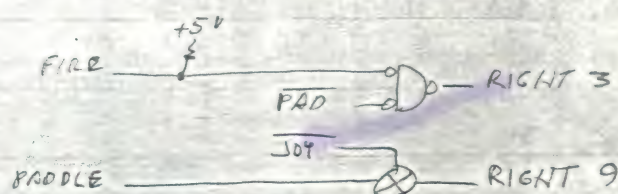
PADDLE 3 (COMBO. CONTROL ONLY)



RIGHT JACK



PADDLE 4 (COMBO. CONTROL ONLY)



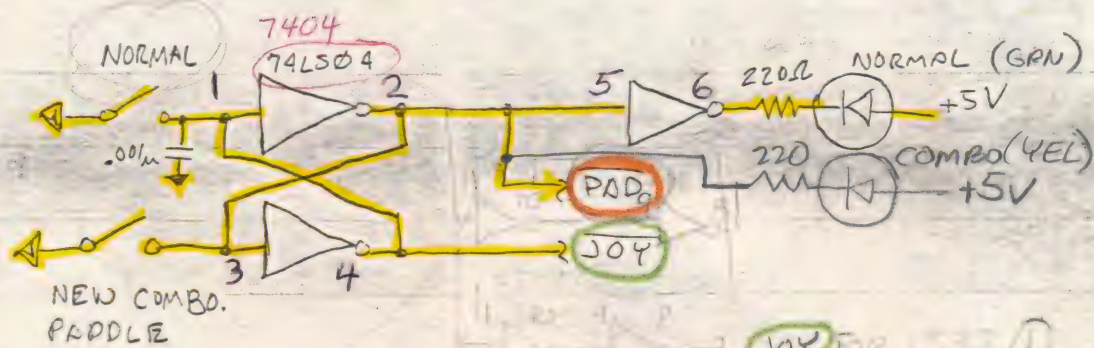
- 3 NOR GATES
- 1 INVERTER
- 1 CMOS SWITCH
- 1 LED
- 8 RESISTORS

.4V @ 1.6mA

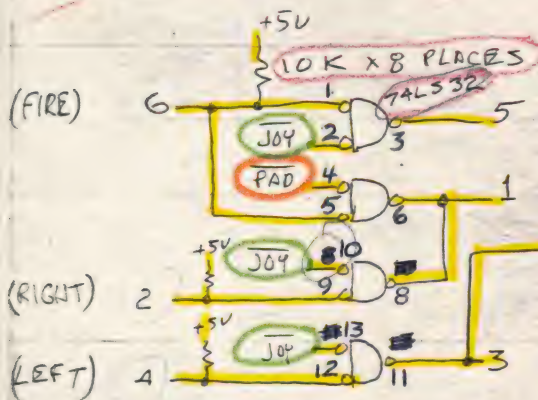


CINDY

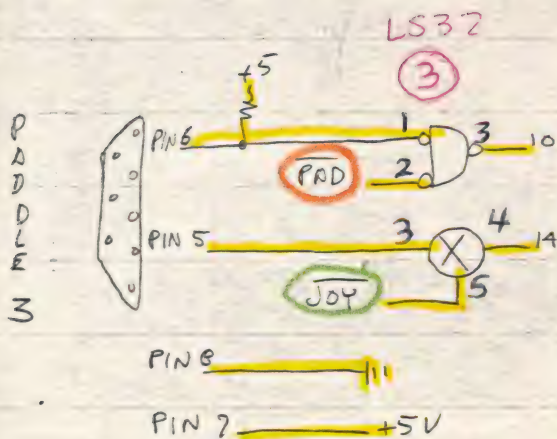
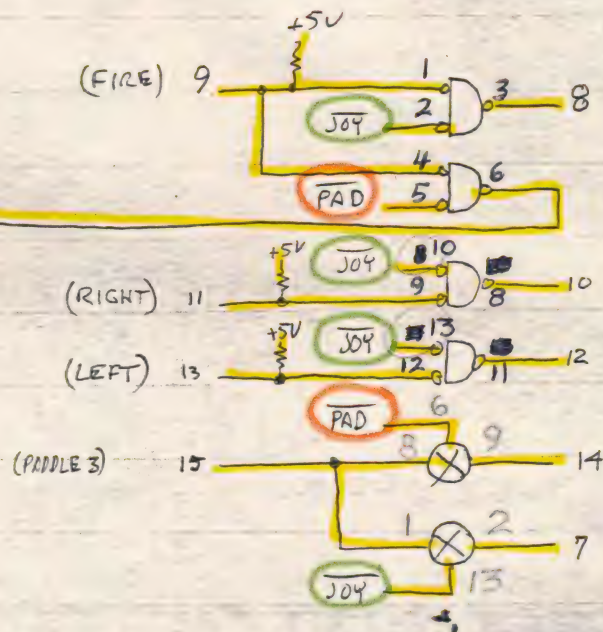
RCM 6/10/81



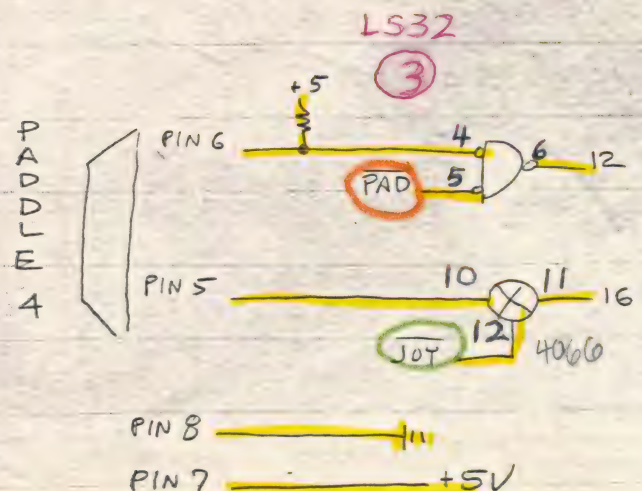
LS32  
LEFT CONN. ①

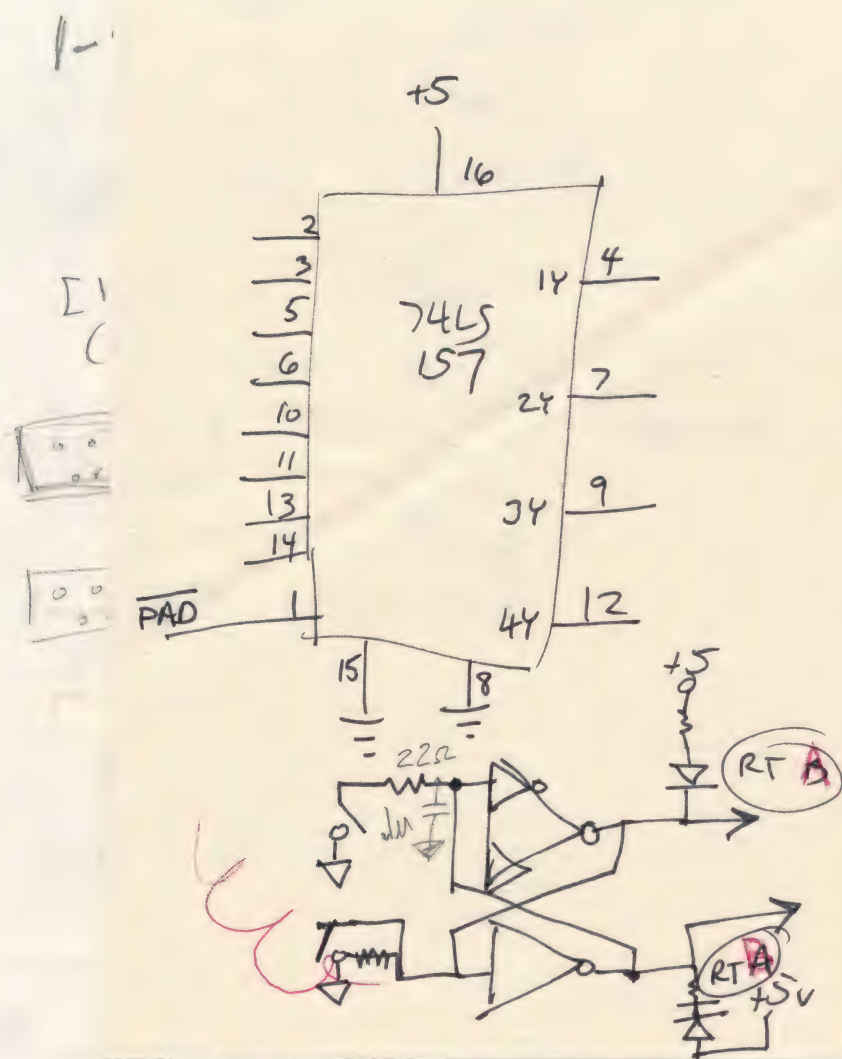


LS32  
RIGHT CONN. ②



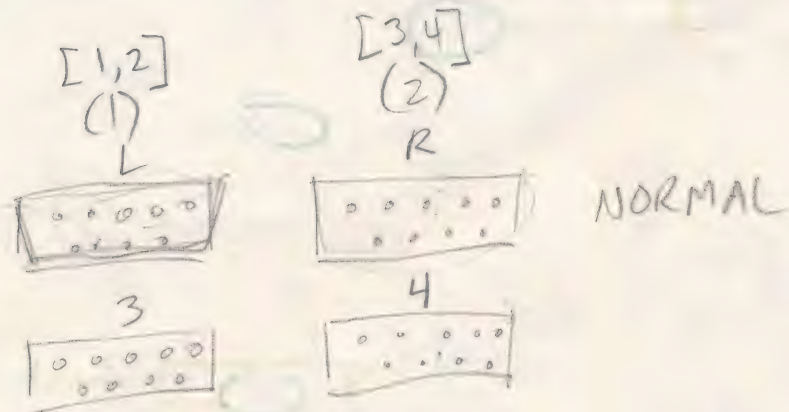
PCS LAB  
727-5810







4 JOYSTICK UP, DN, L, R  
 1-9 → 1 FIRE (TRIG)  
 → 2 V+, GND  
 → 2 POT LINES





DESIGNER		 AIARI INCORPORATED 1272 BURREDS AVE. SUNNYVALE, CA. 94086	
CHECKED	ENGINEER	PRODUCT & TITLE	CINDY
PROJECT ENG.	PROJECT NO.	MASTER NO.	REV.
DOCUMENT CNT	SCALE 1" = 1'	SHEET 5 OF 6	1A

CPS





ASSEMBLY TITLE

CINDY PCB ASSEMBLY

P/L CAO18029

## PARTS LIST SPECIFICATION

Page 1 of 1

Drawn DAN KRAMER

Checked

Mech. Eng.

Proj. Eng.

Elec. Eng.

Rev.

1

Mfg. Eng.

Rev.	Description	Date	Apprv.	Rev.	Description	Date	Apprv.
1	PROTO RELEASE #1	10/14/81					

Item	Part Number	Qty.	Description
1	CO17235	1	7405 I.C., U6
2	CO14362	1	74 LS32 I.C., U5
3	CO17224	1	74 LS157, U4
4	CO10745	1	6507, U1
5	CO10444	1	TIA, U2
6	CO10750	1	6532 RIOT, U3
7	CO11464	1	4066 I.C., U7
8			
9			
10			
11	CAO12174	1	5 PIN R.F. MODULATOR B
12	CAO18030	1	P.C.B. SUB-ASSEMBLY



ASSEMBLY TITLE

CINDY PCB SUB-ASSEMBLY

P/L CAO18030

## PARTS LIST SPECIFICATION

Page 1 of 4

Drawn DAN KRAMER

Checked

Mech. Eng.

Proj. Eng.

Elec. Eng.

Rev.  
1

Mfg. Eng.

Rev.	Description	Date	Apprv.	Rev.	Description	Date	Apprv.
1	PROTO RELEASE	10/14/81					

Item	Part Number	Qty.	Description
1	CO14181-03	11	CAP, CERAMIC AXIAL: .1uf, +80-20%, C1,9,18,21,26,27, 32, 33, 51
2	CO14181-02	5	" " " .01uf, " , C7,13,24,49,50
3	CO14181-01	16	" " " .001uf, " , C15,17,19,34-46
4	CO14179-13	1	" " " 20pf, +5%, NPO, 50V, C4
5	CO14179-01	1	" " " 22pf, +5%, NPO, 50V, C12
6	CO14179-05	2	" " " 47pf, +5%, NPO, 50V, C5,10,11
7	CO14180-04	1	" " " 150pf, +20%, X7R, 50V, C16
8	CO14180-07	2	" " " 470pf, +20%, X7R, 50V, C47,48
9	CO10821	2	" POLYSTYRENE: 820pf, 5%, 25V, C8,52
10	CO14353	4	"POLYSTER RADIAL: .068uf, +10%, 100V,C28-31
11	CO14372	2	" ELECTROLYTIC AXIAL: 4.7uf, +75-10%, 35V,C14,2
12	CO14371	1	" " " 10uf, +50-10%, 16V,C25
13	CO17517	1	" " " 3300uf, +50-10%, 16V,C20
14	CO17885	2	"POLYSTER RADIAL: .1uf, +5%, 100V,C3,22
15			
16			
17			
18	14-5220	3	RESISTOR: 22Ω, 1/4W, 5%, R26,31,52
19	14-5560	1	" 56Ω, 1/4W, 5%, R3
20	14-5521	8	" 220Ω, 1/4W, 5%, R27-30,34,35,49,51
21	14-5102	4	" 1KΩ, 1/4W, 5%, R6,9,16,17
22	14-5122	1	" 1.2KΩ, 1/4W, 5%, R19
23	14-5182	4	" 1.8KΩ, 1/4W, 5%, R36-39
24	14-5332	2	" 3.3KΩ, 1/4W, 5%, R10-13
25	14-5472	5	" 4.7KΩ, 1/4W, 5%, R2,8,18
26	14-5912	2	" 9.1KΩ, 1/4W, 5%, R15,24
27	14-5103	12	" 10KΩ, 1/4W, 5%, R32,33,40-48,50,54,55
28	14-5153	1	" 15KΩ, 1/4W, 5%, R5
29	14-5183	3	" 18KΩ, 1/4W, 5%, R14,20,23
30	14-5243	2	" 24KΩ, 1/4W, 5%, R1,25
31	14-5363	1	" 36KΩ, 1/4W, 5%, R21
32	14-5753	1	" 75KΩ, 1/4W, 5%, R22
33	14-5154	1	" 150KΩ, 1/4W, 5%, R4
34	19-411504	1	POTENTIOMETER: 500KΩ, 1/4W, 5%, R7
35			
36			
37			



## PARTS LIST SPECIFICATION

Page 2 of 4

Item	Part Number	Qty.	Description
38 39	CAO15796	1	CARTRIDGE SOCKET ASSEMBLY: J7
40 41 42	CO16010	1	CRYSTAL: 3.579545 MHz, Y1
43	31-1N914	4	DIODE: 1N914, CR2,3,14,15
44	31-1N4001	5	" 1N4001, CR1,4-7
45	CO14776	6	" LIGHT EMITTING, CR8-13
46 47 48 49	CO18023	3	" LED SUPPORT
50 51 52	CO14384	4	FERRITE BEAD : L1,3-6
53 54 55	<del>78-16001</del>	<del>A/R</del>	<del>HEATSINK COMPOUND</del>
56	CO15752	1	INDUCTOR: 1.8uH + 5%, L3
57 58 59	CO10823	1	" 12 1/2 TURN VARIABLE .85-1.2uH, L2
60	CO17263	1	JACK, POWER: J5
61	CO10448	4	" 9 PIN "D" SUB. RT.ANGLE , J1-4
62 63 64	79-5903	1	" R.F. OUTPUT, J6
65	CO14386-02	3	SOCKET, I.C.: 14 PIN, X5-7
66	CO14386-03	1	" " 16 PIN, X4
67	CO14386-08	1	" " 28 PIN, X1
68 69 70	CO14386-09	2	" " 40 PIN, X2,3
71	CO14397-XX	1	SWITCH, ROCKER: S1
72	CO12241	2	" SLIDE: S10,11
73 74		8	" MOMENTARY PUSH BUTTON: S2-9
75	CAO16075	1	SUB. ASSY. HEAT SINK AND REGULATOR TYPE: 7805
76	33-2N3906	1	TRANSISTOR: 2N3906, Q1
77 78 79	33-2N3653	1	" 2N3653, Q2
80	CO16805	1	ALTERNATE FOR ITEM #40
81 82	CO10727	1	ALTERNATE FOR ITEM #61

ASSEMBLY TITLE CINDY PCB SUB-ASSEMBLY

P/L CA018030

REV.1

## PARTS LIST SPECIFICATION

Page 3 of 4

Item	Part Number	Qty.	Description
83	C018028	1	P.C.B.



ASSEMBLY TITLE	CINDY PCB SUB-ASSEMBLY	P/L	CA018030
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PARTS LIST SPECIFICATION				Page 1 of 3
Drawn	DAN KRAMER			
Checked	DK 2/14/82			Mech. Eng.
Proj. Eng.				Elec. Eng.
				Mfg. Eng.
				Rev. 3

Rev.	Description	Date	Apprv.	Rev.	Description	Date	Apprv.
2 A	PROTO RELEASE						
3	PRTOT RELEASE						

PRELIMINARY  
FOR INFORMATION ONLY  
NOT A CONTROLLED DOCUMENT

Item	Part Number	Qty.	Description
1	CO14180-19	9	CAP, CERAMIC AXIAL: .1uf, + 20%, X7R, C1,9,18,21,26 27,34,35,51.
2	CO14180-18	6	" " " .01uf, +20%, X7R, C5,7,13,24,49, 50.
3	CO14180-17	14	" " " .001uf, +20%, X7R, C15,17,19,36-46.
4	CO14180-04	1	" " " 150pf, +20%, X7R, 50V, C16
5	CO14180-07	2	" " " 470pf, +20%, X7R, 50V, C47,48
6	CO14179-01	1	" " " 22pf, +5%, NPO, 50V, C12
7	CO14179-05	1	" " " 47pf, +5%, NPO, 50V, C11
8	CO14179-19	1	" " " 100pf, +5%, NPO, 50V, C10
9	CO14179-22	1	" " " 10pf, +5%, NPO, 50V, C4
10	CO18261	2	" POLYSTYRENE AXIAL AUTO INSERTABLE: 820pf, 5%, N150, 25V, C8,52.
11	CO14353	4	" POLYESTER RADIAL: .068uf, +10%, 100V, C28-31
12	CO17885	1	" " " .1uf, +5%, 100V, C22
13	CO10394	1	" " " .22uf, +5%, 100V, C3
14	CO14369	2	" ELECTROLYTIC RADIAL: 4.7uf, +75-10%, 35V, C2,14
15	CO14392	1	" " " 10uf, +50-10%, 16V, C25
16	CO19040	1	" " " 3300uf, +10%, 25V, C20
17			
18			
19	14-5220	3	RESISTOR: 22Ω, 1/4W, 5%, R26,31,52
20	14-5221	7	" 220Ω, 1/4W, 5%, R27,30,34,35,51,53,5
21	14-5621	1	" 620Ω, 1/4W, 5%, R19
22	14-5102	4	" 1KΩ, 1/4W, 5%, R6,9,16,17
23	14-5182	6	" 1.8KΩ, 1/4W, 5%, R36-39,56,57
24	14-5272	1	" 2.7KΩ, 1/4W, 5%, R18
25	14-5332	2	" 3.3KΩ, 1/4W, 5%, R10,12
26	14-5472	4	" 4.7KΩ, 1/4W, 5%, R2,8,11,13
27	14-5912	1	" 9.1KΩ, 1/4W, 5%, R15
28	14-5103	15	" 10KΩ, 1/4W, 5%, R24,32,33,40-48,50,54,55
29	14-5133	2	" 13KΩ, 1/4W, 5%, R20,23
30	14-5183	1	" 18KΩ, 1/4W, 5%, R14
31	14-5243	3	" 24KΩ, 1/4W, 5%, R1,21,25
32	14-5563	1	" 56KΩ, 1/4W, 5%, R22
33	19-411504	1	POTENTIOMETER: 500KΩ, 1/4W, 5%, R7



## PARTS LIST SPECIFICATION

Page 2 of 3

Item	Part Number	Qty.	Description
34	14-5910	1	RESISTOR: 91Ω, 1/4W, 5%, R3
35	14-5241	1	" 240Ω, 1/4W, 5%, R4
36	14-5222	1	" 2.2KΩ, 1/4W, 5%, R58
37			
38			
39			
40	CAO15796	1	CARTRIDGE SOCKET ASSEMBLY: J7
41	CO15510	1	CRYSTAL: 3.579575 MHz, <u>+120</u> HZ, HC 18, Y1
42	CO10823	3	STANDOFF: LED
43	31-1N914	4	DIODE: 1N914, CR2,3,14,15
44	31-1N4001	6	" 1N4001, CR1,4-7,16,
45	CO14776	6	" LIGHT EMITTING, DS8-13
46	CO18277	1	HEATSINK
47	CO14348	1	VOLTAGE REGULATOR, 7805, VR1
48	72-1406S	1	SCREW, #4-40x3/8 PHILLIPS PANHEAD
49	75-044	1	WASHER, #4 SPLIT
50	75-914C	1	NUT, #4 STANDARD
51	78-16001	A/R	HEATSINK COMPOUND
52	CO15752	1	INDUCTOR: 1.8uH + 5%, L3
53	CO10823	1	" 12 1/2 TURN VARIABLE .85-1.2uH, L2
54	CO14384	5	" FERRITE BEAD: L4-8
55			
56	CO17263	1	JACK, POWER: J5
57	CO10448	4	" 9 PIN "D" SUB. RT. ANGLE, J1-4
58	79-5903	1	" R.F. OUTPUT, J6
59			
60	CO14386-02	3	SOCKET, I.C. 14 PIN, XU5-7
61	CO14386-03	1	" " 16 PIN, XU4
62	CO14386-08	1	" " 28 PIN, XU1
63	CO14386-09	2	" " 40 PIN, XU2,3
64			
65	CO14397-01	1	SWITCH, ROCKER S.P.D.T., S1
66	CO12241	2	" SLIDE S.P.D.T., S10,11
67	CAO11620-01	8	" MOMENTARY PUSH BUTTON S.P.S.T., S2-9
68			
69	33-2N3906	2	TRANSISTOR: 2N3906, Q1,3
70	34-2N3563	1	" 2N3563, Q2
71			
72	CAO11620-02	8	ALTERNATE FOR ITEM #67
73	CO10177-XX	1	ALTERNATE FOR ITEM #41

## PARTS LIST SPECIFICATION

Page 3 of 3

Item	Part Number	Qty.	Description
74	CO10727	1	ALTERNATE FOR ITEM #57
75	CO12242	2	ALTERNATE FOR ITEM #66
76	CO18028	1	P.C.B.



ASSEMBLY TITLE

CINDY PCB ASSEMBLY

P/L CAO18029

## PARTS LIST SPECIFICATION

Page 1 of 2

Drawn DAN KRAMER

Checked

Mech. Eng.

Proj. Eng.

Elec. Eng.

Rev.

3

Mfg. Eng.

Rev.	Description	Date	Apprv.	Rev.	Description	Date	Apprv.
3	PROTO RELEASE						

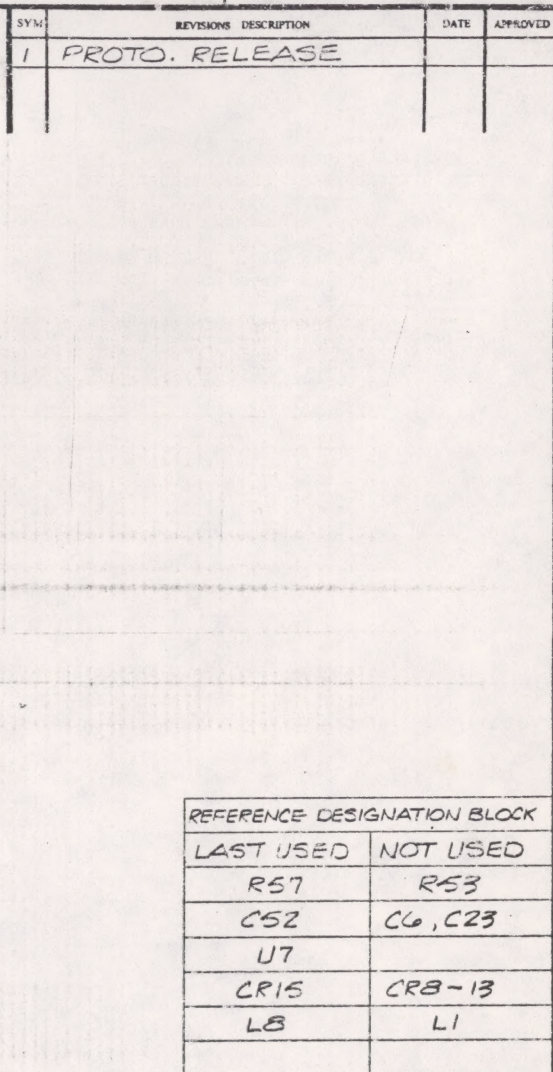
Item	Part Number	Qty.	Description
1	CO17235	1	7405 I.C., U6
2	CO14362	1	74 LS32 I.C., U5
3	CO17224	1	74 LS157, U4
4	CO10745	1	6507, U1
5	CO10444	1	TIA, U2
6	CO10750	1	6532 RIOT, U3
7	CO11464	1	4066 I.C., U7
8	CO18026	1	TOP SHIELD
9	CO18027	1	BOTTOM SHIELD
10			
11	CAO12174	1	5 PIN R.F. MODULATOR B, A1
12	CAO18030	1	P.C.B. SUB-ASSEMBLY



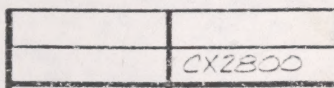




1. USE WITH SUB ASSY. CAO18030.
2. UNLESS OTHERWISE SPECIFIED.
  - A. ALL CAPACTORS ARE IN MICROFARADS.
  - B. ALL RESISTORS ARE IN OHMS,  $\frac{1}{4}$  W, 5%.
  - C. DIODE ARE AS NOTED.
  - D. TRANSISTORS ARE AS NOTED.
3. GRAPHIC SYMBOLS & REFERENCE DESIGNATIONS PER ANSI STANDARDS.




REF.	DEVICE	POWER PINS				SPARE ELEMENT OUT PINS
		DES.	TYPE	+5V	GND	
U1	6507		4	2		
U2	T1A		20	1		
U3	6532		20	1		
U4	LS157		16	8		
U5	LS32		14	7		
U6	7405		14	7		
U7	4066		14	7		

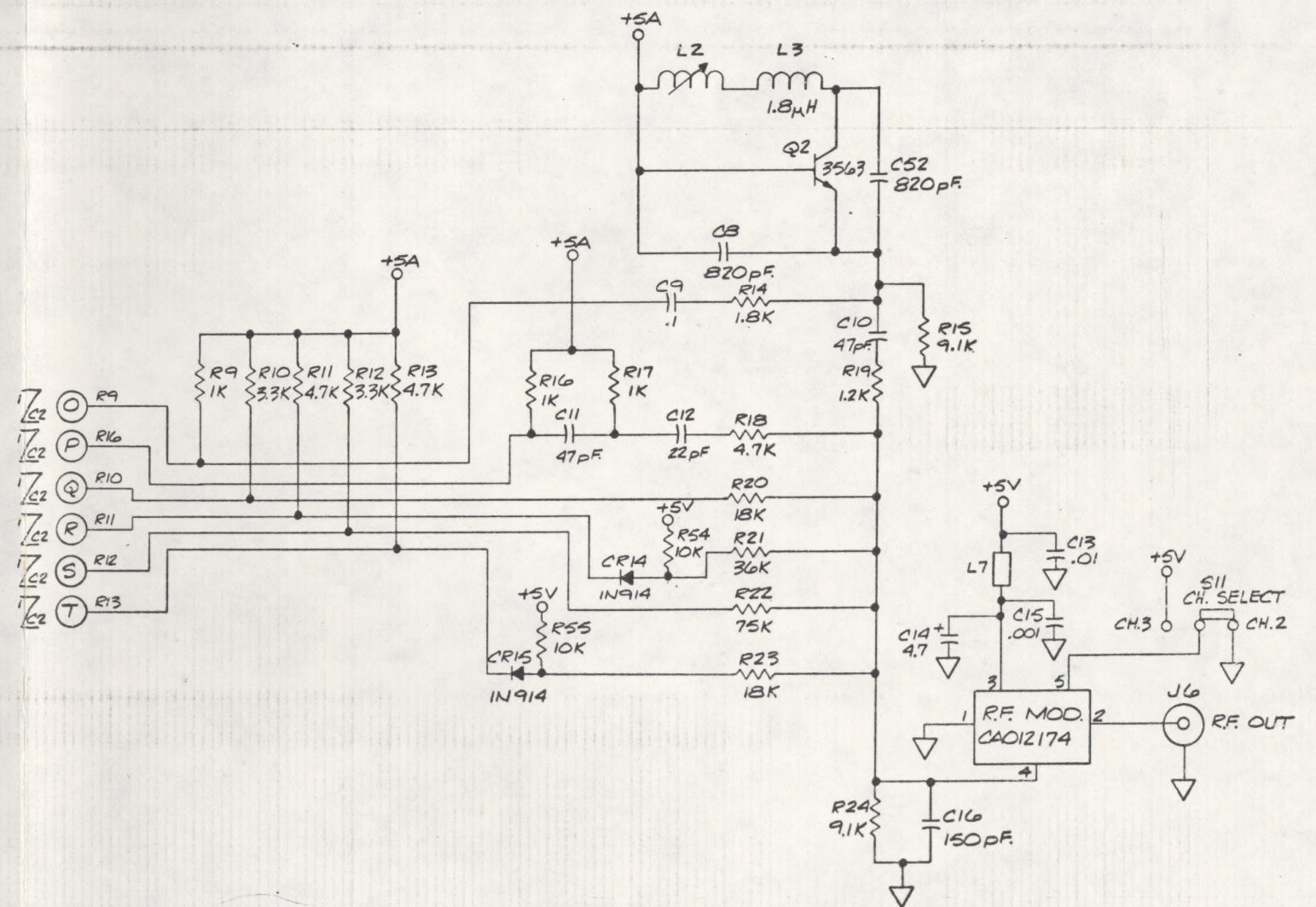
		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON:		DRAWN BY <i>M. M. Mon 10/26/81</i>		DATE	
		ANGLES = 45°		CHECKED		DATE	
NEXT ASSY		USED ON		SURFACE FINISH ✓		ENGINEER	
APPLICATION		MATERIAL		ENGINEERING MOR.		DATE	
				QUALITY ASSURANCE		DATE	
FINISH:		MFG. ENGINEERING		DATE		SCALE	



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 Atari, Inc. 1272 Borregas Avenue Sunnyvale, Calif. 94086 A Warner Communications Company			
TITLE <div style="font-size: 1.5em; font-weight: bold;">CX2800</div> <div style="font-size: 1.5em; font-weight: bold;">MAIN BOARD</div> <div style="font-size: 1.5em; font-weight: bold;">SCHEMATIC</div>			
SIZE <b>D</b>	DRAWING NO <b>CA018029</b>	REV <b>1</b>	SHEET <b>1</b> OF <b>2</b>





		<p>UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON</p> <p>ANGLES = ±°      A = ±J      B = ±K      C = ±L</p> <p>SURFACE FINISH ✓      D = ±0.03      E = ±0.05</p>	DRAWN BY      DATE <i>M. M. Miller 10/25/81</i>		 Atari, Inc. 1272 Borregas Avenue Sunnyvale, Calif. 94086  A Warner Communications Company		
CX2800			CHECKED      DATE	TITLE CX2800			
NEXT ASSY:	USED ON		ENGINEER      DATE	MAIN BOARD			
APPLICATION			ENGINEERING MGR.      DATE	SCHEMATIC			
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	FINISH:		MFG. ENGINEERING      DATE	SCALE ~	SHEET 2	OF 2	